JPRS 82113

28 October 1982

USSR Report

ENERGY

No. 120

FBIS FOREIGN BROADCAST INFORMATION SERVICE

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FUELS

SUPPORT FOR AZERBAIJAN'S OFFSHORE OIL-WELL REPAIR CRITICIZED

Baku VYSHKA in Russian 18 Jun 82 p 3

[Article by VYSHKA surprise-inspection brigade: Yu. Agayev, tractor driver; S. Mustafayev, foreman; S. Bagdiyan, engineer; and V. Gol'tsev, VYSHKA correspondent: "Without Variations"]

[Text] VYSHKA has written several times about the repair-services problems of offshore oilfield workers. One such article was the one by foreman E. Akhmedov of the NGDU [Oil and Gas Recovery Administration] imeni N. Narimanov, "More Could Have Been Done," which was published in the newspaper's 8 August 1980 issue. It pointed to deficiencies in the work of repair brigades that were caused by a lack of reliable equipment and tools.

Many critical remarks have been expressed in regard to the new LPR-10E hoist, which was created by AzINMash [Azerbaijan Scientific-Research Institute for Oil Machinebuilding] for the repair of deep offshore wells. Testing of an experimental model showed considerable deficiencies that reduced the effectiveness of its use.

In response to a worker's article (VYSHKA, 23 September 1980), Soyuzneftemash [All-Union Association for Oil Machinebuilding] reported that the deficiencies that had been observed in the hoist had been eliminated and measures had been taken to preclude such errors in the future. It was also reported that new types of equipment for the overhaul and current repair of wells were being developed.

Almost 2 years have passed since then. Just what has changed in that time?

"Two wells have been repaired," states N. V. Girumyants, senior mechanical engineer for the overhaul and underground repair of wells of the NGDU imeni N. Narimanov "with the help of the hoist. But this cost us much effort. The fact is that various components of the rig, particularly the transmission box, went out of order during the tests. The braking system, the electric motor and other things caused great inconvenience in the work. The designers accepted our remarks for information purposes, but later, for some reason, they were not considered."

We were convinced of the authenticity of what was said at the NGDU imeni Serebrovskiy. There they had tested a second experimental model of the hoist, which was fabricated, like the first one, at the Machinebuilding Plant imeni Leyt. Shmidt. And, although the hoist was carefully readied for the operation, the desired results were not obtained. At site No 326, where this installation stood by itself, like an orphan, among various scrap-metal items, we managed to converse with members of foreman V. Garayev's brigade--driller N. Kurbanov, machinery operator V. Afanas'yev and others. The workers were of one opinion: the hoist is not suitable for the repair of deep offshore wells.

Specialists of Kaspmorneftegazprom [Caspian Offshore Industrial Association for Oil and Gas Recovery] came to the same conclusion. What is more, they are correctly complaining that the designers and machinebuilders are altogether too slow in creating and mastering the series output of reliable equipment and tools for overhaul and current repair of wells.

"Each year," says T. Zeynalov, senior engineer of Kaspmorneftegazprom's overhaul section, "the amount of repair work at offshore oilfields grows, but, unfortunately, we are not coping with it. The fact still is that there is no suitable machinery. At the same time, at an All-Union conference back in 1976 the basic areas for promoting technical progress in the area of well repair were reviewed and measures contemplated for creating highly productive equipment and tools. However, much of what was contemplated still remains unfilfilled."

All this slows the matter down seriously. Most labor intensive operations have not been mechanized. For example, screwing together and unscrewing pipe joints for tubing is done manually, and well-overhaul brigades use cumbersome, heavy elevators. The physical effort expended would be much less by far if the brigades had small-gauge tools at hand. Incidentally, the lightweight ETAD-50 and ETAD-80 elevators, which AzINMash has now developed and which the repairmen want badly, have passed the tests successfully, but serial production thereof is being delayed intolerably.

Matters are worse for the repair of wells that have been drilled by the cluster method. The lack of a set of resources for renovating them delays fulfillment of operations and increases expenditures. Take, for example, the NGDU imeni N. Narimanov, where the deepest wells in the VPO [All-Union Industrial Association] Kaspmorneftegazprom are being operated. The actual duration of one overhaul here almost doubles the norm and underground repair time exceeds it by even more.

"We are trying," says chief of overhaul and underground repair of the NGDU's wells A. Bagirov, "to take from the existing equipment everything that will adapt it to our conditions. For example, we are using 32-millimeter cable with five-strand or six-strand block-and-tackle rigging. But they go out of operation quickly because of overloading of the hoists."

The matter is worsened by the fact that the basic pool of hoists is old. It is true that for the last 3 or 4 years the machinebuilders have been producing installations based upon the more powerful T-130 tractor. But even they, according to the testimony of mechanics and machinery operators A. Iskenderov, A. Selyukov, G. Rustamov, F. Zeynalov, M. Rzayev and many others, have deficiencies. For example, auxiliary transmission boxes and starter springs often are broken. Because of the shortage of spare parts, malfunctions cannot always be eliminated at once. Idle time results.

The interests of production require, in turn, well-arranged organization of the labor of the mechanics who service the equipment. But, unfortunately, this work has been set up poorly.

Take, for example, the tractor column at Cape Sangachaly. Here there are 28 different hoists, but the equipment readiness is 50 percent. The lack of bins, telphers and other devices that will facilitate the mechanics' work is [illegible]ling. The shortage of spare parts at the base is being felt. But the main harm is the fact that the schedules for carrying out technical servicing of tractors is not being observed here. What is more, how can this be done if the equipment operates to the point of deterioration, in violation of existing operating rules!

Artemneftegaz [All-Union Artem Oil and Gas Production Association] repairmen also have their problems. This refers primarily to APPR [not further identified] units that have been installed on separate offshore footings. Round-trip operations and the washing of sand plugs are performed with their help. The equipment is not bad, but each year it becomes increasingly difficult to rejuvenate it. The fact is that the units were taken out of production a long time ago, and not one plant in the country makes spare parts for them. A malfunctioning of hoists interrupts the work of underground-well repair brigades. Idle time for the first 4 months of this year was 861 brigade-hours, which is almost double the amount for the corresponding period of 1981.

"Back in last year," says pipe-string mechanical engineer E. Radzhabov, "the prime plant of Azerneftemashremont [Association for the Repair of Oil Wells in Azerbaijan] was charged with repairing 10 units annually. However, only one repair has been made so far."

Each year the role of the repair service for offshore oilfield workers increases in the drive for an intensification of recovery and the fulfillment of plans and socialist commitments. And it is the duty of scientists, designers, machinebuilders and supervisors of oil and gas recovery enterprises to do everything possible to provide the repairmen with highly productive equipment and tools and to raise the technical level of repair and conditioning operations to the proper level.

11409
CSO: 1822/255

KIRGHIZIA'S NONINDUSTRIAL GAS USERS REMINDED OF HAZARDS, SAFETY RULES

Frunze SOVETSKAYA KIRGIZIYA in Russian 10 Aug 82 p 4

[Article by G. Akhremenko, chief of the Operations and Maintenance Section of Kirgizgazifikatsiya [Kirghiz SSR Gas-Services Association]: "Where There Is Gas, It Needs to Be Watched"]

> [Text] One of the areas for improving the workers' welfare is the wide introduction of gas into the republic's housing facilities. The use of gas fuel instead of solid fuel has indisputable advantages. These are reduction in the time taken to prepare food, a rise in the sophistication of household affairs, and economic advantages because of the low cost of gas. At present, this convenient and inexpensive type of fuel is being used in the Kirghiz SSR by more than 2.5 million residents. All cities and settlements have been converted to use gas, and kolkhozes and sovkhozes and the workers of high-mountain range pastures are receiving gas. More than 1,000 facilities for municipal, domestic-amenity, social and cultural purposes and a large number of the republic's industrial consumers are using the blue fuel.

The amounts and pace of conversion to gas and the supplying of gas to the republic's housing and social-building inventory require ever-increasing attention to the operating condition of household gas equipment. Despite the good economic and hygienic characteristics of gas fuel, emergency situations can arise when it is used incompetently or carelessly. Unfortunately, many people do not give thought to what a menacing and insidious force is concealed in this inoffensive, flickering blue flame.

It must be constantly recalled that with leaked gas and air an explosive mixture can form. Analysis indicates that the basic cause of gas leaks and the forming of explosive mixtures is carelessness committed when fitting the pressure regulator of the Baltika on the self-closing valve of the gas tank. Exhibiting carelessness, the gas consumer often puts the regulator on slantwise and turns it on without checking the tightness of the valve connection to the tank by wetting it with an ordinary soap emulsion. As a result, gas enters the burner and, simultaneously, leaves through the unsealed connection, and accumulates until it forms a concentration that poses an explosion hazard. For this reason alone explosions and subsequent fires have occurred in Tokmak, the Belovod settlement, and twice during the first quarter of the year in the city of Frunze.

Experience indicates that heavy, irreparable losses occur when people use gas devices when they are in a state of alcoholic intoxication, and also devices that are installed privately without the knowledge of the gas services. It is for this reason that the residents of House No 20 on Ulitsa Bol'nichnaya in Tokmak suffered. The residents' stupefaction by liquor, the fact that the gas stand in the premises was not installed according to the safety rules, and ignorance of safety procedures in the use of gas devices led to grave consequences.

Special attention and care must be observed with the use of flow-through type gas-water heaters and household furnaces, whose combustion products are discharged through a flue. Even here, following the rules for the use of gas equipment and proper ventilation of gas-equipped kitchens are reliable protection from an unfortunate incident.

Families residing in the cities of Osh (Ulitsa Petrova, 37) and Przheval'sk (Ulitsa III Internatsionala, 146) disregarded the basic rules about operating gas devices; they used flow-through type gas water heaters for a long time without admitting fresh air, with the doors and small hinged ventilation panes tightly closed, and, as a result, the people were poisoned.

In cases of gas leaks from devices and gaslines in multistory apartment houses, increased precautionary measures should be taken. It must be remembered that gas that escapes from damaged portions of gas pipelines can spread over great distances in the ground and get into cellars and basements, and into the staircases and first floors of apartment-house and social buildings. A lighted match or cigarette or the switching on or off of electric appliances can cause an explosion here. In order to avoid this, the emergency service of the gas activity should be called at the first sign of a gas leak (odor). Before arrival of the emergency service, people must be removed from the danger zone and in no case should one try to find the place of the gas leak with an open flame. Windows and doors must be opened and the premises well aired.

In order to avoid unfortunate incidents, the republic's organizations and institutions should intensify surveillance over the upkeep and correct condition of underground utility lines and shafts and clean manholes and shafts in good time of extraneous matter and dirt. The gas activity's services must be allowed access in order to check the basements of apartment houses, social buildings and educational and therapeutic institutions. This will help to prevent the dangerous consequences of gas leaks from underground gaslines.

I would like to remind enterprise, institution and housing-administration managers to increase their monitoring of the safety and correct upkeep of household gas appliances. It is not allowed to engage in the private installation of additional gas appliances or the dismounting thereof, or to organize facilities for municipal, household, social or cultural purposes in multiple-unit apartment houses that have been connected up for gas, without the knowledge of the gas services of Kirgizgazifikatsiya organizations.

Strict observance of the rules for the use of gas in the household is a guarantee of safety. Only then will gas always be a reliable and good helper in apartments.

11409
CSO: 1822/255

ORENBURG GAS INDUSTRY PLEDGES ADDITIONAL WORK COMMITMENTS

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 3 Jul 82 p 1

[Article: "In Response to the Party's Concern"]

[Text] The socialist commitments of the collective of the Order of Lenin Orenburggazprom [All-Union Industrial Association of Orenburg for the Recovery of Gas] for 1982.

In implementing the historic 26th CPSU Congress decisions about accelerating the development of the gas industry, the collective of the Order of Lenin All-Union Industrial Association Orenburggazprom is successfully carrying out plan tasks and socialist commitments for the second year of the 11th Five-Year Plan. During the first 5 months of the year, 600 million cubic meters of natural gas were recovered, 2,000 tons of sulfur were produced and 12 million rubles of profit were obtained above the plan, and the labor productivity task was overfulfilled.

The association's labor collectives adopted the decisions of the May 1982 CPSU Central Committee Plenum and the report of CPSU Central Committee General Secretary Comrade L. I. Brezhnev, "On the USSR's Foodstuffs Program for the Period up to 1990 and Measures for Realizing It," with enormous inspiration and unanimous approval.

In answer to the party's and government's concerns about improving the Soviet people's welfare and in striving to make a concrete contribution to the execution of the Foodstuffs Program, the association's collective has been included in the All-Union competition for attainment of the intended goals and it adopted increased socialist commitments for 1982.

With a view to satisfying more completely the agricultural-industry complex's requirements for fuel and raw material, the collective resolved to recover 300 million cubic meters of natural gas and 10,000 tons of gas condensate and to produce 3,000 tons of sulfur for the production of mineral fertilizers above the previously adopted commitments. To construct ahead of schedule 32 kilometers of gas pipeline to rural communities. To construct at the oblast's sponsored kolkhozes and sovkhozes 38 two-unit apartment houses, to extend assistance in growing vegetables, and to prepare and send 500 combines to gather the harvest.

Consequently, to increase the volume and effectiveness of the production of output at subsidiary farms and to obtain 13.7 kilograms of meat and 8.3 kilograms of hothouse vegetables per worker of the association. To create a reliable base for further developing animal husbandry and to increase the cattle population 1.4-fold this year.

the association's blue-collar workers, engineers, technicians and white-collar workers have assured the Leninist Communist Party Central Committee and Comrade L. I. Brezhnev personally that it will exert all its efforts, knowledge and experience to implement the decisions of the May 1982 CPSU Central Committee Plenum, and they have called upon the collectives of gas-industry enterprises and organizations to promote socialist competition still more widely for successful realization of the Foodstuffs Program and to achieve this year a considerable increase in foodstuff resources.

11409
CSO: 1822/255

EQUIPMENT PROBLEMS SLOW MINING OF YAKUTIA'S COKING COAL

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 7 Jul 82 p 2

[Article by V. Zhdamirov, general director of Yakutugol' [Yakutsk Coal Mining Association]: "What to Take Yakutsk Coal With"]

[Text] Coal-laden Neryungri is already visibly acquiring its own outlines. City blocks are rising up, the framework of the coal preparation plant is going up, and the builders are pressing work on the GRES, having resolved to put its first unit into operation next year, ahead of time. And as construction of the South Yakutia coal complex gathers strength, everyone's attention is turned increasingly to the facility that has been defined as the most important in the development of the country's new industrial region--the Neryungrinskiy Strip Coal Mine. Not much time has passed since that memorable day when the first trainload of coal left here on the Little BAM [Baykal-Amur Mainline]. But already the country has received about 5 million tons of excellent fuel from South Yakutia. This year we are to introduce capacity here that will enable 2.5 million tons of coal per year to be mined. This task alone requires exertion of the whole collective's efforts. However, our concern today is tomorrow's coal, which will be raw material for coke. Strictly speaking, this is the reason for the multimillion rubles of expenditures, the selfless labor of thousands of people, and the new city of Neryungri itself.

But mining the coal is not simple: a 300-meter thickness of rock must be removed. Stripping work has now become the stumbling block for South Yakutia's miners. But it is not just today, the illness is proving to be chronic: for 3 years in a row the strip mine has failed to meet the work plan for stripping, although the goals were much below the designed amounts. An appreciable lag is being observed even now.

The reasons? A shortage of work hands, which, in turn, is explained by a shortage of housing. The geology of the coal's bedding has proved to be more complex than expected. Blasting quality leaves much to be desired. Equipment downtime is great--because of breakdowns, organizational miscues and poor communications. There are other factors also that slow the job, but today just one is to be discussed--the equipment that we are operating, which will be instrumental in determining, if you will, Yakutia's coal-mining policy for the long term.

Stripping work is primarily the job of an excavator. Our main stake here is a child of Uralmash, the EKG-20 excavator. The first machines already proved themselves at the mine face, and they are being assembled routinely. By the end of the

five-year plan it is the EKG-20 that will define our excavator fleet. This is encouraging, but it provokes concern.

Industrial tests of the excavator's prototype were not conducted with completeness: it stood idle more than it operated, because of breakages, and in the spring the machine had to be put completely under development. However, when it was doing stripping work, serious miscalculations appeared. The power thyristor converter system was unreliable. Breakage of cast parts--tracks and wheels--were frequent. The fit of the scoop's teeth and the bucket's fasteners were imperfect, and, what is more, even the bucket itself was on the weak side. The cab's design was poorly thought out.

Mintyazhmash [Ministry of Heavy and Transport Machine Building] decided, however, to produce a test lot.

And here are the results of this decision: all the subsequent machines arrived with those same shortcomings that the prototype had. Eliminating them here in Neryungri costs too much. I am not talking about money, although the funds for development were not specified in the plans of either the board that is building the complex or of the Yakutugol' Association itself. I am talking about time: it passes in disputes--who is to pay for this work, in coordinations for the delivery of parts from Uralmash. From morning to night, in the association's offices I hear only: "Hello, Moscow," and "Hello, Sverdlovsk...."

Meanwhile, in comparison with last year alone, the plan for stripping work has more than doubled, now comprising 44 million cubic meters of rock. In the next 2 years almost 200 million cubic meters are to be sent to the heap. And won't it happen like this: the preparation plant goes into operation in 1984, as it is supposed to do, but it will have nothing to prepare?

I do not say that the machine's fate worries no one but the coal miners. Last year USSR Minugleprom [Ministry of Coal Industry], Mintyazhmash and Minelektrotekhprom [Ministry of Electrical Equipment Industry] developed a set of measures to provide for normal operation of the excavator. At the start of this year the First Deputy Minister of Heavy and Transport Machine Building R. Arutyunov and Uralmash specialists visited Neryungri--the talk was about measures for the final refinement of the machine. But it is impossible to say that the measures taken have given any kind of appreciable result.

Elimination of the deficiencies and the prevention of downtime--all this should be based upon more responsive design and technological refinements by Mintyazhmash and Minelektrotekhprom. And here ministry support centers in Neryungri could be of help. Creating them here was specified. Minelektrotekhprom did this in timely fashion, and the results are visible. For example, complaints about the electrical equipment have lessened, and problems are being solved more rapidly and in businesslike fashion. Mintyazhmash has also issued an order about creating a support center, but it still has not evidenced itself in any fashion.

Time rushes on. Today the efforts of all who are participating in the creation of the new and extremely promising machine must be concentrated on mastering its design capacity. Beyond this is mastery of the design capacity of the strip mine itself.

The industrial automotive transport causes as much concern. BelAZ-7420 dump trucks, in particular, are engaged in taking the coal out. Each year shipments of them are to be increased. The machine in and of itself is good, but our strip mine's terrain does not enable full yield from its utilization. At one time Minavtoprom [Ministry of Automotive Industry] proposed to deliver to the South Yakutia coal complex a test model of the BelAZ-7521, with a load capacity of 180 tons. Five years have passed but the board still has not received funds for these vehicles, although, according to Sibgiproshakht [Siberian State Design Institute for Mines] estimates, 33 such dump trucks should have been at work at the strip mine the next year. But even the prototype manufactured by the Belorussian Association for the Production of Heavy-Load Trucks was sent for tests, in accordance with a Minavtoprom decision, not to Yakutia but to the country's southern regions. Vehicles for taking out coal and rock, just like the excavators, show a productivity much lower than designed. One of the causes is the lack of equipment for road upkeep. The design called for the strip mine to have 10 wheeled bulldozers. Today there is not one: output of the models we need still have not been mastered by the plant, and they are being replaced by low-capacity road machinery.

And, finally, about the production base. As we see, the mine-transport equipment of the Neryungrinskiy Strip Mine is basically new, it is at the stage of industrial test, refinement and introduction. It requires a large amount of repair work and a high level of technical servicing.

How are matters going here today? Twenty-two stations are needed for the technical servicing and repair of just one M-200 dump truck, but there are only two. In the time that the machines lose waiting for technical servicing, they could have hauled more than 6 million cubic meters of rock. The time lost because of the poor repair base and the time lost in the work of drilling machinery, excavators and bulldozers are great.

The plan draft calls for the introduction of a block of departments for repairing mining machinery and a division for the daily inspection and diagnostics of industrial transport. It must be said that this is not the first period for the introduction of a block of departments and a diagnostics division--Yakutuglestroy [Yakutia Trust for the Construction of Coal Mining Facilities] and the board for construction of the coal complex clearly underevaluate the entire importance of the "logistics" for the facilities.

Let us note also that the introduction of a unit of departments barely blunts the problem, without removing it. Already this year the amounts of repair and technical servicing exceed the capability. It is necessary to press the construction of the machinery-repair plant. It is necessary to have its first phase, together with a foundry, by 1985.

Finally, a large share of the fault for the situation that has prevailed with the stripping operations is the fault of the coal miners themselves. The strip mine's collective, association specialists and the city's party committee are taking steps to correct the situation. Improvement of the production control structure and the specialization of sections are proceeding, making their work more precise and purposeful. Integrated mine-transport brigades are being established. Each day we sum up the results of the competition among the sections, the columns, the brigades and the crews, and the staff of the party's city committee is monitoring the progress of the stripping work. A commission has been created under the

strip mine's party committee to monitor the quality of blasting operations, and it has improved appreciably the preparation of shotholes. In brief, much is being done. But the task of the day for each section, is to yield the maximum effect and to join forces, and the task for everyone is to do everything at his work place that depends upon him, in order that this most valuable raw material for the metallurgist--Yakutsk coke--will be obtained on time, as planned by the party and the government.

11409
CSO: 1822/258

ONCE-LAGGING UKRAINIAN COAL MINE IMPROVES DESPITE OBSTACLES

Kiev PRAVDA UKRAINY in Russian 3 Jul 82 p 2

[Letter by A. Gayvoronskiy, leader of a mineworkers' brigade of the Pervomayskaya Underground Mine of Pervomayskugol' (Voroshilovgrad Oblast), and a commentary by A. Zharkikh, PRAVDA UKRAINY correspondent: "How Many Go in the Laggards?"]

> [Text] An open letter by underground miner A. Gayvoronskiy to his colleagues throughout Pervomayskugol' [Perovomaysk Coal-Mining Association]

For many years now the red star--the symbol of the miners' fame--has not burned over our headworks. It is sad, and it is human to feel hurt that you cannot show your character at the mine face, your miner's boldness, your work category, as our compatriots Aleksey Stakhanov and Nikita Izotov did in their day and as Anatoliy Polishchuk, Nikolay Skrypnik and other heroes of the coal front are managing to do today.

I confess it honestly: I do not even like to look at the board of our mine's work indicators. For a long time there it has been like a cataract in the eye, a noxious figure with a minus. Our collective is more than 15,000 tons short of the plan this year alone. Moreover, as they say, there is no place to roll to. A worker's conscience does not wish to be reconciled with such a state of affairs.

We can, of course, explain our lack of success at any moment. Our main obstacle is the very complicated mine geology. But, my dear friends, is there really a time when conditions in an underground mine are ideal for working? Not that I can remember. And indeed we have been able, even with poor geology, to produce coal up to the plan and even above it! The whole business here is precise, proper scientific organization of work, when engineering and technical support are at their peak, creativity is held in esteem, and the wide vista opens up the mineworkers' enthusiasm.

It should be said that the communists and all our brigade's members have been very strongly stung to the quick. Several times direct and open discussion about this has been conducted at section party meetings. And the opinion was unanimous: even given our good-for-nothing "geology," coal mining can be increased, and the plan can be met.

The persistence of the communists and all of the brigade's miners has become well-known to association director P. S. Yermachenko. He took the operation of our brigade under personal monitoring.

After perceiving powerful engineering support, we decided at an open party meeting: to achieve the highest labor productivity and to bring the average daily workload per breakage face to 1,000 tons. If it is considered that our plan was only for 360 tons per day, one can imagine our threatening to achieve such a goal. But such a step was conditioned by many factors--organizational, technical and moral.

First of all, a new IK-101 cutter-loader was assembled at the longwall, with Sputnik supports, and we procured an adequate number of spare parts and installed new batteries on the electric locomotive. Sectional trains appeared in the haulage drift for the first time. In brief, the problem of transporting the coal was completely solved. Many other technical and operating innovations also were introduced.

Underground mine specialists extended great help to us in organizing production. Especially senior engineer A. V. Grankov of the engineering section and chief operating engineer Ye. N. Nikiforov. They developed a so-called planning diagram of the whole coal-mining process. Each operation was computed literally by the moment. Let's say, precisely half an hour was allocated for development work--the delivery of timber, the choice of teeth for the cutting implement and lubrication of the equipment. Not a minute more. And so it was throughout the whole operating chain.

Upon the conclusion of a shift, the specialists analyzed fulfillment of the planning diagram. The element's work is reflected, as if in a mirror. This permits timely measures to be taken for the slightest violation of the coal-mining pace. And, in the final analysis, such a scientific approach to organizing work enables machine time for the cutter-loader's work to be greatly increased and, consequently, the amount of fuel mined to be increased.

In getting ready for the shockwork campaign, we sent communists and Komsomol members to the most important sections. They were the ones in charge of the labor rivalry. A special month of increased coal mining was opened by the Komsomol Youth element of V. Mel'nichuk. It sent to the surface 500 tons of fuel per shift. And the elements under I. Rizak, N. Belotskiy, V. Khimera and L. Muravskiy got off to a good start. On various days they sent as much as 1,200 tons of coal out from the mine face. There had not been such a workload per longwall at our mine for a long time.

It was very nice to see with what enthusiasm and inner uplift all members of the brigade toiled--no one had to be pushed or coerced. The work seethed in the hands of the miners. We did not even take difficulties and failures severely--so firm was our confidence of the success of the job. And there were, as usual, no few difficulties in our path.

But the people did not grumble, and they did not give up their stand. With the doggedness inherent in miners, they proceeded to the assigned missions. Under such circumstances the character of each person manifested itself brightly. We got to know each other better.

It is true that the brigade still has not managed to reach completely the goal intended: where the seam's thickness is 70-80 centimeters, we have been sending to the top 22,000 tons of coal per month from the longwall. The average daily workload comes to 800 tons. It is not enough for us, but this is twice as much as previously.

Yes, we cannot place emphasis on natural factors. Mine-geology conditions often still dictate their rights, because we do not have enough equipment capable of effectively operating at thin seams with unstable side rock. Nevertheless, our brigade's experience has indicated: even under such conditions, with scientific organization of the work, more coal can be obtained.

Engineers and technicians who were called upon to create scientifically substantiated systems for doing the job, not only at the mine takes but also at specific longwalls, and monitor strictly the fulfillment of their calculations, should play an important role here. The planning diagrams developed by our enterprise's specialists are an example of this.

The main thing, dear comrades, is that the breakage-face mine workers, the transport personnel and the repair mechanics are behind us. How much fuel we will send to the top depends to a great extent precisely upon our persistence and our working character. We have been in the laggards' ranks long enough, it is time to revive the former glory of both our Pervomayskaya mine and of the whole Pervomayskugol' Association.

Commentary

For more than 8 years the Pervomayskugol' did not cope with the plan for coal mining. Such a lengthy lagging nowadays has been worrying many, as indicated by the anxious letter of experienced miner A. Gayvoronskiy.

Anatoliy Antonovich is right: one cannot lump all the blame onto the geology these days--this does not do honor to the miners. And one cannot be reconciled any longer with the low state of organization of work and the poor production discipline that flourish at some of the association's coal enterprises. How, we ask, is it possible to explain the fact that at underground mines there is constantly a shortage of breakage face lines? There is drifting equipment and today's penetrators do not have to be concerned about experience (at one time they established records for high-speed passage of mine workings), but the pace of development of underground trunk lines still is very low.

These facts also state that it is a matter not only and not so much of the geology. The collective of the Underground Mine imeni Menzhinskiy, has since the start of the current year, mined above the plan more than 50,000 tons of coal, the Gorskaya 38,000 tons, and the Zolotoye--28,000 tons. And are N. P. Litoshko's mineworkers working under some special kind of mine-geology conditions? No. But indeed it can send a thousand or more tons of coal to the top each day.

But, unfortunately, such collectives are not plentiful in the Pervomayskugol' Association. The majority have become accustomed to the status of laggards.

Right now the association's supervisors are creating so-called support mining brigades at some mines.

"We are placing great hopes on them," says association general director P. S. Yermachenko. "And it is not because these brigades will produce the most meaningful part of the fuel. They will become, like Anatoliy Antonovich Gayvoronskiy's brigade, our support for the wide propagation of experience gained. And they will bring the others after them."

All right, the cherished desire stands before us. I would like to believe that A. A. Gayvoronskiy's letter will find a vital response in the hearts of the miners of the Pervomayskugol' Association.

11409
CSO: 1822/258

MACHINE FOR GRINDING, GOBBING ROCK PREVENTS COAL-MINE SUBSIDENCE

Kiev PRAVDA UKRAINY in Russian 1 Jul 82 p 2

[Article by Engineer A. Denishchenko (Donetsk): "The 'Titan's' Underground Path"]

[Text] Industrial assimilation of Titan crushing and gobbing complexes has been going on for 2 years at Donbass [Donets Coal Basin] underground mines. The work of their creators--Dongiprouglemash [Donetsk State Institute for the Design of Coal Mine Machinery] designers and Yasinovataya Plant and Plant imeni G. I. Petrovskiy (Donetsk Oblast) machinebuilders--has received a high assessment. The Titan has been awarded the State Emblem of Quality. This highly productive complex not only arrives to replace the heavy manual labor of the packer, but it also provides for high density of rock gobbing in the excavated space during development work at underground mines. This means that the virgin reserves of coking coal that are located under urban buildups can become accessible for mining. The maintenance-free upkeep of excavation enables substantial savings in funds and materials. And--what is very important--the social task of protecting the environment is solved. For rock left in the mine means pure air for the miners' towns and settlements, and thousands of hectares of fertile land are saved.

"We worked on the Titan complex in close collaboration with plant workers and Dongiprouglemash designers," says N. F. Os'merik, manager of a department of a branch of Gipromashogobashcheniye [State Institute for the Design of Concentrating Machinery]. "A difficult start is recalled. The department of 12 people should have, after searching for internal reserves, brought into series production, simultaneously with the manufacture of four planned cutter-loaders and longwall mining machines, a completely new machine that has no counterpart in world experience. They weighed their capabilities, studied the mood of our colleagues from Dongiprouglemash, and decided--let's do it!

"Preparations for production were made: design documentation for the new complex was brought into correspondence with the standards that are in effect at the plant. A system of measures that insured high stability of the indicators of the Titan's engineering level and quality was worked out. Thanks to the efforts of V. F. Kanunnikov, chief of assembly department No 1, suggestions by the plant's workers that were aimed at overcoming difficulties connected with the manufacture of

complicated parts were put into production. As a result, it became possible to reduce the weight of various components, increase manufacturability, reduce metals intensiveness and increase reliability. Fifty-seven Titan complexes have now been produced. The manufacture did not come easy, and there were cases where complaints even came to the plant about copies of the shakedown series. But we persistently improved our child."

About 30 Titan complexes are now in operation at Donbass underground mines.

The collective of the Donetsk Trudovskaya Underground Mine is called the pioneer in Titan assimilation. After starting with tests of an experimental model, the miners restructured the whole operating cycle to take account of the model's potential, improved work organization in the mine section, achieved a sharp increase in the pace of penetration, and brought daily mining of coal up to three and more thousand tons. All the collectives furnished Titans are studying the work experience of the mine section that Twice Hero of Socialist Labor I. I. Strel'chenko supervises. Assimilation of the complexes is going on over a broad front, and ever newer possibilities for their use are being uncovered.

The Titan is especially promising where it supports the mining of coking coal from virgin reserves or at great depths, and in underground mines that are dangerous because of mine-geology conditions. More than 90 million tons of this valuable raw material have been set aside in virgin reserves under Donetsk. But the potential for developing them has been limited: subsidence of the soil above the mine workings could damage the buildings. Up until recently there was no adequately profitable and reliable method for the mechanized gobbing of excavated space with rock of a density high enough to approach the natural rock density. Right now advances have been noted in this area. And the Titan has proved itself to be simply irreplaceable here--for it yields a rock density as high as 0.7-0.8 of the density of the original mass.

Specialists of Donetsk's Underground Mine imeni Gor'kiy worked out the idea of excavating, with Titan's help, coking-coal reserves in the virgin blocks of coal that lie at great depths under the city's central blocks. These underground storehouses contain up to 1.5 million tons of fuel, to which the miners have no access without special equipment.

An experiment is being conducted at section No 1 which is under test specialist V. V. Vydrenkov. The Livenskiy seam lies at a depth of 624 meters, and its thickness varies within the limits of 1 meter. Two tunneling brigades and one mining brigade are working in the section. The collective of the young has been increased by the new job. The operating process is organized in unusual fashion: so-called paired drifts 15 square meters in cross-section each, which are placed parallel at a distance of 80 meters, are tunneled. The coal in the space between the drifts is taken by the cutter-loader method, with simultaneous gobbing of the excavated space with rock mass. It is pressed into the mine working by high-powered pipeline nozzles from two Titan complexes, which have been deployed in upper and lower drifts. Penetration is performed by drilling and blasting, and all the rock is fed by loading machine to a Titan crushing and gobbing installation, where it is ground by the high-powered jaws of a singular gigantic meat grinder: it is ground to the required sizes, moistened, and is carried precipitously along the pipeline in the form of a pulp by a powerful stream of air, and, on flying out, it fills up and sort of cements the excavated area.

After carrying out one cycle, the Titans are moved after the advance of the drifts, leaving a solid mass in place of the coal seam. This way, two long underground corridors are laid out and then, parallel to them, another two....The coal that is left in a virgin state between these paired drifts will be taken on the return trip.

The specifics of the Underground Mine imeni Gor'kiy prompted the solution of two problems--economic and ecological--simultaneously. New piles should not tower above the city, one must not permit subsidence of the soil above the excavations beyond the designed amount, and, at the same time, the coking coal should not be expensive because of the prime operating costs. The Titan complex opens the way to a new potential for underground mines to excavate formerly inaccessible virgin reserves without the slightest damage to urban structures (measurements that have been made indicated that the percent of soil subsidence above an excavation made with the Titan is even less than the computed norms). This means that henceforth piles will not rise up close to places of large-scale recreation for Donetsk residents--the Park imeni Shcherbakov.

Miners of the Underground Mine imeni A. A. Skochinskiy, which also uses the Titan, faced several other problems.

"We are working the Smolyaninovskiy seam, which is dangerous because of gas, coal dust and methane blowouts," says mine chief engineer P. G. Gundarev. "It is located at a great depth, and it can be worked only by direct attack. The deeper the seam the more complicated it is to get maintenance-free upkeep of the excavation--a good rubble strip is required for this. The necessity for mechanized gobbing is dictated still more by the fact that the underground mine has been completely conveyorized and the coal that is mined is high-quality coking coal, and mixing it with rock is extremely undesirable. Prior to the Titan there were practically no effective gobbing machines at the underground mine. After obtaining the first complex we set ourselves the goal of insuring maintenance-free upkeep of the drift at great depth and of creating safe conditions for workplaces. After a study of the machine on the surface we lowered it to the 1,200-meter horizon--the deepest main unloading longwall is there. All the rock obtained from penetrating the drift is laid into the lower part of the longwall. The drift is produced by drilling and blasting. From 1 meter of advance, 30-35 cubic meters of rock are obtained. In a year of work, 200 meters of drift are made, and about 7,000 cubic meters of rock are left at the longwall. The rubble strip is distinguished by high density, maintenance-free upkeep of the drift and work safety are provided for, and there is less dust. The complex has completely met the miners' hopes."

In general, the Titan, as they say, has passed. Not all of its components satisfy the miners' needs. The engine is still not very reliable (electrical-equipment industry plants supply them), and the wear-resistance of the pipelines should be increased. The designers and machinebuilders are now working in close contact on the solution of these problems.

11409
CSO: 1822/258

BROKEN PROMISES OF SUPPORT SLOW CHITA COAL-MINE DEVELOPMENT

Moscow SOVETSKAYA ROSSIYA in Russian 27 Jul 82 p 1

[Article by M. Mikhal'kov (Chita): "How Much Longer to Wait?"]

[Text] As SOVETSKAYA ROSSIYA has already reported, stripping work at the Tataurovskoye field, which has high-quality brown coal, began in April of this year. It is difficult to overestimate the importance of this fact to the oblast's economic-development potential.

The collective of the Vostochnaya Underground Mine has undertaken to develop the field. It is not a simple matter--to find reserves for building a new coal-mining area 75 kilometers from an underground mine that is in active production.

"We have done the development work with our own forces," says mine director N. Vlasov. "We have built a substation and right now we are finishing the second phase of it. We have laid 16 kilometers of electric-power line, built up the roadbed for and laid segments of railroad track, and built a boilerhouse and a garage....Unfortunately, the good labor spirit often is obscured by a lack of coordination of various kinds."

Prior to starting operation of the field, First Deputy USSR Minister of Coal Industry M. Shchadov and Vostsibugol' [East Siberian Coal Production Association] chief V. Besedin visited the oblast. In hurrying up the mine director to introduce the Tataurovskoye field into operation and in speaking about its great importance, they did not skimp on promises, and they gave assurances that the necessary help would be forthcoming. The guests returned to their homes a long time ago, but they are by no means hurrying to fulfill what has been promised.

Clearly, the assimilation of any new production facility goes on hand in hand with the surmounting of various difficulties. But the collective should see the long term, and become aware of changes for the better--this a guarantee of effective work. Otherwise, things will go on at Tataurovskoye the same as before. The miners from Chernovskiy settlement who work at the strip mine are brought in on buses rented by the underground mine. Seventy-five people are crowded into the 42-seat vehicle, with people standing for 2 hours to get to the shift. Many miners, not standing up to the road ordeal, refuse to work at the new strip mine, but are waiting for the buses that were promised by ministry and association supervisors.

Here is a good place to recall still another promise. Glavchitastroy [Main Administration for Construction in Chita Oblast] chief I. Molotkov came to the strip mine recently, since his subunit should erect the miners' settlements. In a conversation, the workers wanted to know when the first apartment house would be built. "In exactly a year we will give you the keys for the housewarmings," answered Ivan Fedorovich. Such a date completely satisfied the people. But now a doubt has appeared: up until now no one has arrived to build the housing.

The erection of the "firstling" was entrusted to PMK-62 [Mobile Mechanized Column No 62], which N. Savos'ko manages. In a talk with us, he was candid:

"We will not do anything before the third quarter. Things are bad with the supplying of materials--there is no brick or reinforced concrete. As for the first apartment house, turning it over next year is not expected...."

The regularity of operation of industrial enterprises and the supplying of heat and electricity to the oblast center and to nearby areas depend upon the level of coal mining at the Tataurovskoye field. Chita residents have memories of difficult winters, when, because of a lack of fuel in their departments and apartments, the cold moved in. Why repeat the mistakes? I would like to know when the responsible workers of USSR Minugleprom will carry out their promises.

11409
CSO: 1822/258

SYNOPSES OF ARTICLES IN 'COAL OF THE UKRAINE', MAY 1982

Kiev UGOL' UKRAINY in Russian No 5, May 82 pp 47-48

UDC 622.658.387.61

FIFTY YEARS OF THE IZOTOVSKIY MOVEMENT

[Synopsis of article by P. I. Marosin, pp 4-6]

[Text] Birth of the Izotovskiy movement in the coal industry is covered. Labor initiatives continuing the Izotovskiy traditions are presented.

UDC 622.658.387.61

MINERS OF THE UKRAINE, WINNERS OF THE ALL-UNION SOCIALIST COMPETITION IN 1981

[Synopsis of article by V. A. Dubodelov, pp 6-8]

[Text] The work of the collectives of the enterprises of the Uk SSR coal industry, winners in the all-union socialist competition in 1981 is covered.

UDC 622.272(088.8)

PROTECTION OF SHAFTS OF MINES AT THE ASSOCIATION OKTYABR'UGOL'

[Synopsis of article by P. S. Babenko, N. I. Desyaterik and V. Ye. Kardakov, pp 9-10]

[Text] An analysis is made of the state of protection of shafts at mines of the association Oktyabr'ugol'. Recommendations are made for methods of protecting preparatory shafts: belt blocks, reinforced concrete posts.

UDC 622.06-118(477.61/62)

BASIC REQUIREMENTS FOR THE TECHNOLOGY OF TRANSFERRING CAVITIES FORMED AS A RESULT OF GAS-DYNAMIC PHENOMENA

[Synopsis of article by A. I. Karlov, N. B. Parshikov, and P. F. Rudenko, pp 10-11]

[Text] An analysis is made of the experience of transferring cavities of gas-dynamic phenomena in beds of the central region of the Donbass. Basic requirements made for planning the technological schemes for transferring different types of cavities are presented.

UDC 622.232.5

EXTRACTION OF COAL USING DEVICES OF SEMIAUTOMATIC CONTROL OF A HYDROMONITOR

[Synopsis of article by L. G. Semenov, G. V. Kessariyskiy and G. V. Skachko, pp 11-12]

[Text] Results are presented of inspection tests of program-remote hydromonitor extraction of coal using the UPU unit at the hydraulic mine "Pioner" of the association Dobropol'yeugol'. One illustration.

UDC 622.834:622.273.18

FRONTAL AND AXIAL WORKING OF SHAFTS

[Synopsis of article by V. M. Kuleshov and V. S. Pikhovkin, pp 12-13]

[Text] Features are presented of manifestations of mine pressure in shafts depending on their orientation in relation to the stoping face in the underlying bed. Two illustrations, two references.

UDC 622.333.013:658.323.8.002.227

IMPROVEMENT IN THE STIMULATION OF WORK QUALITY OF MINERS

[Synopsis of article by I. M. Krichevskiy and A. M. Barynin, pp 14-15]

[Text] An evaluation is made of work quality and material stimulation of miners in the system of controlling product quality. A verification is made of the basic conclusions of one of the subsystems of the UKP compressor station at the mines. One table, two references.

UDC 658.27.004.14:658.012.2:622.33

STANDARD SYSTEM FOR PLANNING MEASURES TO DECREASE EQUIPMENT IDLING

[Synopsis of article by A. V. Litvintsev, V. I. Steshenko and V. P. Tishchenko, pp 16-17]

[Text] A method is presented for planning measures to reduce idling because of malfunctions of mining equipment based on the use of a standard system of modeling, successive optimization, coordination and making of plan decisions (TISPLAN). One table, one illustration, one reference.

UDC 622.016.62+551.243

PRESERVATION OF THE EXTRACTION LEVEL IN WORKING BEDS WITH FAULT DISORDERS

[Synopsis of article by N. A. Rangin, pp 17-18]

[Text] A technique is presented for determining the coefficient of preservation of extraction level in longwalls during the transition (by-passing) by them of the fault geological disorders in coal beds with regard for change in the length of the longwall, coefficient of readiness of the complex, hardness of the rocks, losses of coal and extraction of rock. Two illustrations.

UDC 622.8.003.13

EFFECT OF ACCIDENTS ON NET COST OF COAL

[Synopsis of article by A. P. Yur'yev and L. F. Deisenko, pp 18-19]

[Text] Analysis is made of the effect of economic losses from accidents to the net cost of coal. Recommendations are made for preventing unjustified exaggeration of the net cost of coal during its planning or correction at the level of the mines and associations.

UDC 622.01:658.387:658.5 "Mine Khrustal'skaya"

ORGANIZATION OF LABOR AND PRODUCTION AT THE MINE "KHRUSTAL'SKAYA"

[Synopsis of article by Ya. I. Untershats, pp 19-21]

[Text] Geological conditions, the system of working, underground transportation, mechanization of stoping and preparatory operations at the mine "Khrustal'skaya" of the association Donbassantratsit are covered. The work of the brigade headed by I. D. Yavorskiy is discussed. Plans and commitments for 1982 and for the 11th Five-Year Plan are presented. Two illustrations.

UDC 622-519-52

APPARATUS FOR CONTROLLING THE CENTRAL CONTROL PANEL AND ITS EXPERIMENTAL OPERATION AT THE MINES

[Synopsis of article by G. I. Magilat, L. M. Serebrov and A. A. Sirotkin, pp 22-24]

[Text] Features are presented of the apparatus for controlling mechanized complexes, its composition and functional potentialities, and operating principles of the channels for controlling mechanisms. Variants of using the central control panel in the extraction complexes is presented. Two illustrations.

UDC 622.285:531.1

MECHANIZED TIMBERING WITH FACE INCLINE TO 35°

[Synopsis of article by S. S. Grebenkin, V. P. Firsov and V. L. Ivanov, pp 24-26]

[Text] The creation, experimental verification on a test stand and under mine conditions of a mechanized timbering with increased angle of inclination of the face are covered. One illustration.

UDC 622.245.72.001.5

RESOURCES FOR HERMETIC SEALING OF DEGASIFICATION WELLS WITH REMOVAL OF METHANE DURING THE DRILLING PROCESS

[Synopsis of article by M. S. Baranovskiy, N. N. Nevozhay and V. L. Starodubtsev, pp 26-27]

[Text] The design and operation of equipment for the framework of the head of a degasification well which guarantees insulation of the well cavity from the atmosphere of the shaft and removal of methane to a degasification pipeline during drilling are presented. Conditions and results of mine tests of the head of a degasification well are discussed. One illustration.

UDC 622.274.526.48-85

MINE TESTS OF A PNEUMATIC MOTOR V110-25

[Synopsis of article by G. N. Matsenko and V. M. Zhernosek, pp 27-28]

[Text] The device and operating principle of the pneumatic motor V110-25 are presented. Results of inspection tests of repeated test samples are covered. One table, one illustration.

UDC 622.457.2

VENTILATION UNIT IN A PREPARATORY SHAFT

[Synospsis of article by A. I. Lesnikov, p 28]

[Text] An economical and reliable method of heating air in a ventilation unit is discussed. One illustration.

UDC 622.243.2:622.272

CLASSIFICATION OF RESOURCES FOR DIRECTIONAL DRILLING OF UNDERGROUND TECHNOLOGICAL WELLS

[Synopsis of article by V. M. Goncharov, A. Ye. Dauletbayev and K. I. Feranidi, pp 29-30]

[Text] Basic classification signs are covered for the resources of directional drilling of underground technological wells with successive transition from the more general to the particular. One illustration, two references.

UDC 622.46.001.4 "VOD-30M"

RESULTS OF INDUSTRIAL TESTS OF A LOW-NOISE VENTILATION UNIT VOD-30M

[Synopsis of article by Ye. M. Levin, G. I. Zakharchuk, and V. G. Makodzeba, pp 30-31]

[Text] The features of the unit VOD-30M, and positive testing results are presented. The advantages for acoustic qualities with preservation of aerodynamic are discussed. Two tables, one illustration.

UDC 622.64/.2:621.867.065

MULTIPLE-LAYER CONVEYER BELTS BASED ON OPEN-WEAVE FABRICS

[Synopsis of article by Ye. Kh. Zavgorodniy, V. I. Morev and Ye. M. Vysochin, pp 32-33]

[Text] The designs of conveyer belts based on open-weave fabrics are discussed. The results of laboratory and industrial tests of experimental batches of these belts are presented. Three illustrations.

UDC 622.647.1:539.4.011.25

IMPROVED DURABILITY OF CONNECTING LINKS OF THE CONVEYER SP-63

[Synopsis of article by V. I. Alimov, A. I. Tertyshnyy and I. A. Perederiy, pp 33-34]

[Text] The influence of different regimes of complete, incomplete and isothermic hardening with tempering and without tempering on the structure, as well as the properties of steel samples 35KhGSA and connecting links made of it are presented. One illustration.

UDC 622.232.72.086

TESTING OF HYDRAULIC COMPENSATOR FOR CHAIN STRETCHING 1KVTs

[Synopsis of article by V. N. Starik, G. A. Litvinov and A. I. Statsenko, pp 34-35]

[Text] The design and operating principle of chain stretching compensator 1KVTs are presented. The results of industrial tests of the compensator at the mine "Pavlogradskaya" from the association Pavlogradugol' are presented.

UDC 622.817.47

CALCULATION OF PARAMETERS OF DEGASIFICATION WELLS WITH SHAFT SYSTEMS

[Synopsis of article by O. I. Kasimov, N. I. Antoshchenko, G. M. Mirumyan and G. V. Spektor, pp 35-36]

[Text] The results of studying the work of degasification wells drilled counter to the stoping face, and the method for calculating their parameters are presented. Two tables, three illustrations, three references.

UDC 622.831.322

EVALUATING THE PROBABLE DEVELOPMENT OF REPEATED BLOW-OUT ON STEEP BEDS

[Synopsis of article by Yu. T. Khorunzhiy, N. R. Bel'skaya and M. M. Sukhurova, p 37]

[Text] An evaluation is made of the probable development of repeated blow-outs. The method of contouring of especially explosive zones after a blow-out is presented. The original data are coordinates of the blow-out cavity and the established dimensions near the zones of the cavity with high probability of appearance of repeated blow-outs. Three illustrations.

UDC 622.411.3(571.17)

STUDY OF THE FACTORS DETERMINING THE NATURAL GAS CONTENT OF KUZBASS BEDS

[Synopsis of article by V. A. Knurenko, p 38]

[Text] Detection of the set of geological-geophysical signs influencing the distribution of natural gases in beds is made. The hypothesis to evaluate the significance of the effect of these signs on gas content is verified. Two tables.

UDC 622.822.22

EFFECT OF CONDITIONS OF OCCURRENCE OF STEEP BEDS OF THE DONBASS ON ENDOGENOUS FIRE DANGER

[Synospsis of article by N. V. Kaledin, P. S. Pashkovskiy and V. Ya. Al'perovich, pp 39-40]

[Text] The influence of the conditions of occurrence of coal beds in the central region of the Donbass on the endogenous fire danger is explained. The critical (for spontaneous combustion) thickness of the stratified accumulations of coal in the worked space is determined. One table.

UDC 622.1:681.3.06

TABLE-TOP ELECTRONIC COMPUTERS IN SURVEYING

[Synopsis of article by P. A. Verbovoy and I. A. Levchenko, pp 40-42]

[Text] Principles are presented for compiling a program of computation and leveling of a polygon-metric course with gyroscopically directional angles and without them. Suggestions are made of the expediency of using a key computer for solving surveying tasks. One illustration.

UDC 622.765.002.237

INTENSIFICATION OF THE PROCESS OF COAL FLOATING AT THE CENTRAL ENRICHMENT PLANT "CHUMAKOVSKAYA"

[Synopsis of article by I. P. Vas'ko, L. M. Zinich, and G. A. Mavrenko, pp 42-43]

[Text] The possibility is presented of improving the efficiency of flotation as a result of improving preparation of pulp before the process, and the use of more active reagents and highly productive machines. One table, one illustration.

UDC 622.333.302:612.002.237

NOMOGRAMS TO DETERMINE CONTAMINATION OF COAL IN LONGWALLS WITH COMPLEXES

[Synopsis of article by A. A. Krivchenko, A. I. Smirnov and A. V. Turchenko, p 44]

[Text] The method of determining the amount of contamination of coal with rock is presented using nomograms with regard for the stability of rock in the direct roofing, thickness of the bed, coefficient of hardness of the surrounding rocks, rate of advance of the stoping face line and the means of mechanizing extraction. Nomograms are presented for the complexes KMK-97, "Donbass," and KM-87. One illustration.

9035
CSO: 1822/266

SYNOPSES OF ARTICLES IN 'COAL OF THE UKRAINE', JUNE 1982

Kiev UGOL' UKRAINY in Russian No 6, Jun 82 pp 47-48

UDC 622.268.13 "Mine imeni 25th CPSU Congress"

HIGH-SPEED MAKING OF PREPARATORY SHAFTS

[Synopsis of article by S. G. Zashchenkov, pp 6-7]

[Text] The experimental work of the leading drilling brigade of N. V. Vlasov from the mine imeni 25th CPSU Congress from the association Makeyevugol' is presented. One illustration.

UDC 65.012.32:622 "Mine Raspadskaya"

ADVANCES OF THE COLLECTIVE FROM SECTION NO 11 FROM THE MINE 'RASPADSKAYA'

[Synopsis of article by N. V. Logvinenko, pp 7-8]

[Text] Mining-geological conditions are presented for the mine "Raspadskaya" from the association Yuzhkuzbassugol', the leading methods of work of the extracting section No 11. The commitments for 1982 are outlined. One illustration.

UDC 622.026:541.183

MINE-FREE METHOD OF EXTRACTING COAL

[Synopsis of article by F. A. Abramov and V. V. Repka, pp 9-10]

[Text] The principles of the physical-chemical method of transferring coal to the transportable state with its mine-free extraction are presented. One table, three illustrations.

UDC 622.014.3:351.823.3

PROTECTION OF SHAFTS AT DEEP LEVELS

[Synopsis of article by N. I. Smachnoy and A. K. Kuz'mich, pp 10-11]

[Text] Studies are made of manifestations of mine pressure with different methods of protecting the shafts at great depths with the use of the method of modeling by materials equivalent to rocks. One table, one illustration.

UDC 622.224.016.3(477.61/.62)

IMPROVEMENT IN PREPARING STEEP BEDS AT LEVELS

[Synopsis of article by S. K. Strichiboroda, pp 12-13]

[Text] Features are discussed of the technology for making bed ventilation shafts under different conditions of the central region of the Donbass. Interrelated spatial-planning solution for preparing mine fields at the haulage and ventilation levels which stipulate abandoning the ventilation shafts because of collapse is discussed. One illustration.

UDC 622.013:658.561.1

ECONOMIC EVALUATION OF USING PRODUCTION WASTES IN COAL EXTRACTION

[Synopsis of article by A. S. Astakhov and Ye. M. Gitin, pp 14-15]

[Text] The economic effect from using mine methane, rock and mine waters is defined.

UDC 622.33.013:658.152.1(477)

USE OF BASIC FUNDS

[Synopsis of article by Yu. P. Red'ko, pp 16-17]

[Text] An analysis is made of the dynamics of cost and the structure of the basic industrial-production funds of the coal industry, their use for the Ukrainian SSR Ministry of the Coal Industry, associations, majority of types of extraction equipment. Basic principles are presented for reducing fund output and measures for increasing it. Two tables.

UDC 622.23.05:622.26

BLIND SHAFT TUNNELING MACHINE 'STRELA-77'

[Synopsis of article by V. A. Lipkovich and Yu. M. Gorelov, pp 17-18]

[Text] The purpose, design and operating principles of the machine "Strela-77" are discussed. One illustration.

UDC 622.233.623

EXPERIMENTAL WORL FOR ARTIFICIAL TWISTING OF WELLS IN UNDERGROUND CONDITIONS

[Synopsis of article by A. A. Aleynikov, S. A. Vlashin, O. P. Prikhod'ko and T. N. Filimonenko, pp 18-19]

[Text] The advantages and shortcomings of the tested technical resources for artificial twisting of wells are covered. An evaluation is made of the possible use of the resources of oriented drilling of wells from the surface of the ground for drilling curvilinear wells under mine conditions. One table.

UDC 622.67-592.3

EMERGENCY ELECTRODYNAMIC BRAKING OF LIFTING MACHINES

[Synopsis of article by N. P. Rybalko, V. F. Dennik and V. I. Fursov, pp 20-21]

[Text] The flowsheet of an automatic mine lifting unit which can be regulated in the function of unbalance in the active and assigned velocities of lifting electrodynamic braking with one braking drive when the safety drive malfunctions. is presented. The technique of calculating the amount of assigned level of slowing down the system during emergency electrodynamic braking is discussed. Two illustrations.

UDC 621.3:622.647.2

MONITORING THE LOAD OF RAMP CONVEYERS

[Synopsis of article by G. A. Lichkov, B. S. Fal'kov and V. A. Taranenko, pp 22-23]

[Text] Ramp conveyers are discussed. Technical data are presented for the block of monitoring the load, and its operating principle. Recommendations are made for preparing the block for operation on ramp conveyers and for operation in a regime of monitoring the direction of rotation of the electric motor. Two illustrations.

UDC 622-2:621.335:669.131.7

IMPROVING THE QUALITY OF MINE MACHINE PARTS

[Synopsis of article by G. K. Vanzha, V. I. Yaroshenko and S. N. Ulanovskaya, p 23]

[Text] Characteristics are presented for high-strength pig iron which improves the quality of mine machine parts.

UDC 622.647.2:621.3.019.34

RELIABILITY OF ELECTRICAL SUPPLY FOR MINE CONVEYER LINES

[Synopsis of article by M. I. Makarov, V. N. Zernov and A. I. Syrtsov, pp 24-25]

[Text] A technique is presented for determining the standard level of reliability of electrical supply. Recommendations are made. One illustration, two references.

UDC 622.01:621.313.13-213.34.019.3

IMPROVING THE SERVICE LIFE OF MOTORS V250-280 AND VR250-280

[Synopsis of article by V. D. Glavnyy, V. G. Orlov and O. M. Akimenko, pp 25-26]

[Text] Results are presented of a study of the reliability of VR250M4 motors. Recommendations are made for selecting the technology of fabricating the stator windings.

UDC 622.831.24:622.831.327

MECHANISM FOR IMPROVING BLOW-OUT DANGER OF BEDS IN ZONES OF INFLUENCE OF SUPPORT

[Synopsis of article by V. A. Kanin, Yu. V. Megel' and B. I. Kuritsyn, pp 26-27]

[Text] Features are presented for the mechanism of improving blow-out danger of coal beds in zones of influence of support loads confirmed by results of mine studies. Possible ways of reduction are indicated. Two illustrations.

UDC 622.831.322.53.082.79

USE OF IODE INDEX TO PREDICT BLOW-OUT DANGER OF A BED

[Synopsis of article by I. L. Ettinger, R. M. Krivitskaya, F. Ye. Krigman, and L. A. Abramyan, p 28]

[Text] Results are presented from evaluating the blow-out danger of coals and detecting dangerous zones in the bed with the help of the iode index. The dynamics for change in the iode index are presented for determining potentially dangerous zones in the bed. Three illustrations, two references.

UDC 622.878.005.1

STUDY OF THE NOISE SITUATION AT WORK SITES IN MINES

[Synopsis of article by V. G. Grachev, V. V. Popov and L. N. Yakuba, pp 29-30]

[Text] A method procedure is presented for constructing maps of noise of shafts, production rooms and for their use to reveal the work sites with unfavorable working conditions at mines. Results of the studies of the conditions for the noise factor are presented. The nature of the noise created by the main mine equipment is examined. Two illustrations.

UDC 622.413.4

EFFICIENCY OF STATIONARY UNITS OF MINE AIR CONDITIONING

[Synopsis of article by N. N. Khokhotva, A. K. Yakovenko and Ya. I. Driga, pp 30-32]

[Text] Features are discussed of mine stationary cooling units and conditions for their operation. An analysis is made of the factors influencing the operating indicators of the cooling equipment. Improvement in the efficiency of the air conditioning systems of the mine air is examined. Three illustrations.

UDC 622.413.3

TECHNIQUE OF THERMAL SURVEY IN VENTILATION ASSEMBLIES OF MINES

[Synopsis of article by N. I. Fandeyev, A. V. Momot and Ye. I. Sushenok, pp 33-34]

[Text] An analysis is made of the existing technique for thermal surveys of mines. Conditions are presented for conducting the experiment and results. Practical recommendations are made for improving the technique. One table, one illustration, two references.

UDC 622.794.254:66.067.4

STUDIES OF DEHYDRATION OF SLUDGE IN MINE WATERS ON FPAKM FILTER PRESSES

[Synopsis of article by P. G. Vlasov, T. M. Grankina and V. A. Chernikov, pp 34-35]

[Text] Results are presented from laboratory and stand tests of the FPAKM-2.5 filter press to filter thickened mine water. Suggestions are made for optimizing the process. Two tables, one illustration.

UDC 622.51

EVALUATING THE TOTAL WATER INFLUXES INTO UKRAINIAN MINES

[Synopsis of article by A. K. Pomazan, pp 35-36]

[Text] Dynamics of total influxes of water into Ukrainian mines are discussed. Formulas are presented which make it possible to determine the coefficients of water abundance, for predicting influxes and developing measures to use water resources. Two tables.

UDC 658.5:622.01

PREDICTING MINING-GEOLOGICAL CONDITIONS FOR WORKING COAL BEDS

[Synopsis of article by I. I. Sharudo, V. M. Kalinchenko and M. M. Los', pp 37-38]

[Text] Unresolved problems of predicting mining-geological conditions for working coal beds, requirements for the technique of forecasting are presented. The method of geological-mathematical forecasting of mining-geological conditions is presented on the basis of multiple-dimensional mathematical modeling of the field parameters on a computer with the use of algorithms for heuristic self-organization.

UDC 622.81:552.57(477.6)

STUDY OF THE CONCENTRATION OF PARAMAGNETIC CENTERS IN COAL

[Synopsis of article by V. I. Dokiyenko, pp 38-39]

[Text] Results are presented of studies of the influence of geological factors on the concentration of paramagnetic centers in coals of blow-out dangerous and nonblow-out dangerous beds. Two tables.

UDC 622.74:628.517.2

DECREASE IN NOISE OF INERTIA SIEVES

[Synopsis of article by A. S. Umanets, M. K. Zhuk and S. F. Demenin, pp 39-40]

[Text] Basic principles are covered for a high level of noise created by inertia sieves. The most widespread calculated plans of shafts of inertia vibration exciters are presented. Recommendations are made for creating vibration-exciters for series sieves GISL-62. Two tables, one illustration.

UDC 622.7.092:543.822.053.001.4

STAND FOR EXPERIMENTAL OPTIMIZATION OF RADIO-ISOTOPE ASH METERS

[Synopsis of article by A. M. Onishchenko and V. P. Belonozhko, pp 40-41]

[Text] A stand is presented for optimizing radio isotope ash meters, and optimization with its help of the ash meters. The technique is presented for preparing samples of coal, rock, concentrate, sand, slaked lime, iron shavings and pieces of foam plastic. One illustration, one reference.

UDC 622.256

DEEPENING SHAFTS WITH OUTPUT OF ROCK TO THE SURFACE

[Synopsis of article by Ye. M. Durov, pp 42-43]

[Text] An analysis is made of the basic data of deepening shafts of coal basins of the country. Suggestions are made for improving the deepening operations.

9035
CSO: 1822/266

SYNOPSES OF ARTICLES IN 'COAL OF THE UKRAINE' JULY 1982

Kiev UGOL' UKRAINY in Russian No 7, Jul 82 pp 47-48

UDC 622.232.8

MK-75 COMPLEX UNDER COMPLICATED MINING-GEOLOGICAL CONDITIONS

[Synopis of article by V. S. Afendikov, Yu. A. Lebedintsev, and V. Ya. Namakshtanskiy, pp 2-3]

[Text] The experimental operation of the mechanized complex MK-72 in working a bed of average thickness with angle of occurrence 10-26° and unstable side rocks is presented. 1 illustration.

UDC 622.232.8-519

EFFICIENCY OF USING KMK-97 TYPE COMPLEXES UNDER COMPLICATED CONDITIONS

[Synopis of article by V. I. Chekavskiy, and O. A. Shkolyarenko, pp 4-5]

[Text] The results of analysis of work of 35 comprehensively mechanized longwalls in the association Torezantratsit, Selidovugol', Krasnoarmeyskugol' and Dobropol'eugol' under complicated mining-geological conditions are presented. The stoping faces are differentiated according to mining-geological signs. 2 tables 2 illustrations.

UDC 622.232:658.28

MECHANIZATION OF WORK ON TERMINAL SECTIONS OF LONGWALLS

[Synopis of article by I. A. Grigor'yev and V. I. Alifanov, pp 6-7]

[Text] The ways to reduce labor-intensity of work and improve the level of mechanization on terminal section of longwalls in the association Voroshilovgradugol' are covered. The mechanized timbering of conjugation of 4KS and niche-extracting machine 4NM are described. 2 illustrations.

UDC 622.281.5.001.4

TESTING ROOF TIMBERS FOR STANDS OF ENHANCED RESISTANCE

[Synopis of article by A. N. Pugachenko, B. M. Naruzhnyy and N. S. Kuz'menko, pp 8-9]

[Text] The results of mine and laboratory tests of metal roof timbers of enhanced carrying capacity (MV-30 and MV-30m) for operation jointly with stands with resistance 300 kN (SUG-30) are presented.

UDC 621.398:622.01

DEVICE FOR DIAGNOSING UDT FOR THE REMOTE SYSTEM TKU-2

[Synopis of article by B. S. Stroilo, N. N. Dure and M. I. Timchenko, p 10]

[Text] The purpose and operating principles of the UDT device made by the Giprougleavtomatizatsiya and Dnepropetrovsk plant of mine automatics are presented. 1 illustration.

UDC 621.316.925.437:622

IMPROVEMENT IN THE APPARATUS OF PROTECTION FOR MINE THREE-PHASE NETWORK WITH VOLTAGE OF 380 V

[Synopis of article by V. L. Bondar', V. A. Taranenko, I. G. Vasilenko and T. A. Bezuglaya, pp 10-11]

[Text] The device and operating principle of the RU-380 leakage relay made in series by the Dnepropetrovsk plant of mine automatics for protection of 3-phase mine electric network with voltage of 380 V are described. 2 illustrations.

UDC 622.232.8.001.86:551.2/3
"sh.im. Kapustina"

HIGHLY PRODUCTIVE USE OF MECHANIZED COMPLEX 2MKE

[Synopis of article by B. L. Borovik, pp 11-12]

[Text] The experimental work of the brigade of mining workers from the stoping face of V. V. Bad'yin from the mine imeni Kapustina from the association Lisichanskugol' is described. The daily average load is more than 1000 T on the longwall equipped with the 2MKE complex with the combine 1KSh-1kg.

UDC 622.83.622.273.18

EFFECT OF THE PROTECTION METHOD ON STABILITY OF THE SHAFTS TO BE WORKED

[Synopis of article by M. P. Zborshchik and V. F. Vodyanov, pp 12-14]

[Text] The results of mine instrument observation of manifestations of mine pressure in main preparatory shaft to be worked in developing series

of gently sloping beds in the Donbass are prevented. A quantitative analysis is made of the methods of protecting the shaft in the massif of coal one- and two-sided blocks, rubble bands, in collapsed and packed rocks of the bed roofing. 3 tables.

UDC 622.233:622.28.004.5

BLOCK-FREE WORKING OF A BED UNDER CONDITIONS OF THE MINE 'MAYSKAYA'

[Synopsis of article by A. M. Fed'ko and A. F. Alekseyev, pp 14-15]

[Text] Results are presented of working, developing and introducing a block-free technology for extracting coal under conditions of the mine "Mayskaya" from the association Rostovugol'. 1 table, 1 illustration.

UDC 622.285 (470.312)

TYPE OF MECHANIZED TIMBERING FOR ROOFINGS DIFFICULT TO COLLAPSE

[Synopsis of article by P. D. Romanov, Ye. A. Volkov and V. M. Budnik, pp 16-18]

[Text] An analysis is made of the features of interaction of the timbering of the supporting and safety-supporting type with roofing difficult to collapse. Recommendations are made for selecting an efficient plan of timbering which guarantees operating reliability of the metal-structure operation. 2 illustration.

UDC 622.831:550.835

EMANATION OF COAL AND SURROUNDING ROCKS

[Synopsis of article by M. D. Krivitskiy A. P. Degtyarev, V. A. Verbiy and M. P. Orlyanskiy, pp 18-19]

[Text] Results are presented from laboratory and mine experiments to determine the content of emanations in gas which is released from the bore holes drilled for coal. The values of the coefficient of emanation of coal and surrounding rocks are presented. 2 tables, 1 illustration, 2 references.

UDC 622.33.013.003:658.152

IMPROVEMENT IN THE ANALYSIS OF FUND OUTPUT IN THE COAL INDUSTRY

[Synopsis of article by L. L. Mayzel' and N. V. Ushakova, pp 20-22]

[Text] The use of the method of chain substitutions to analysis fund output at mines and in the associations is explained. The example of analysis for the mine "Trudovskaya" from the association Donetskugol' is presented. 3 tables.

UDC 622.262.8.658

EFFICIENT USE OF MECHANIZED COMPLEXES UNDER COMPLICATED MINING-GEOLOGICAL CONDITIONS

[Synopsis of article by Z. S. Bondar' and V. N. Boyko, pp 22-24]

[Text] The effect of complicating mining-geological factors on the longwall load with mechanized complex and longwall with narrow-range equipment and individual timbering is examined. Recommendations are made for the use of complexes in the longwall with complicated mining-geological conditions during planning of development of mining operations in mines. 2 tables, 3 references.

UDC 622.274.526.48:001.5

IMPROVEMENT IN THE EFFICIENT WORK OF HEADING MACHINES ON STEEP BEDS

[Synopsis of article by V. I. Zavertnev, pp 24-26]

[Text] Results are presented from experimental determination of mining-engineering factors which influence the load on a drive. Parameters which characterize the operating regimes of the conveyer-graders and the main reasons limiting the load on the face are covered. Measures improving efficiency of the use of units are explained.

UDC622.67-192:658.152.011

MATERIAL CONSEQUENCES OF MALFUNCTIONS IN ELECTRICAL EQUIPMENT OF MINE LIFTING

[Synopsis of article by S. Ya. Salyga, pp 26-28]

[Text] Features are presented of operating mine lifting units which influence the material damage during disruption of efficiency of the equipment. Ways to reduce the damage and methods of determining it are examined from the viewpoint of national economic efficiency. 1 table, 1 reference.

UDC 622.526

SLUDGE AIRLIFT FOR CLEANING SUMP DRAINAGE CONTAINERS

[Synopsis of article by Ye. A. Triller and A. P. Chernyshov, pp 28-29]

[Text] The experience of using a sludge airlift for cleaning sump drainage containers and the advantages are presented. 1 illustration.

UDC 622.647.1

IMPROVING THE SAFETY OF ADJUSTING SCRAPER FACE CONVEYER CHAINS

[Synopsis of article by N. T. Demchenko and T. F. Kotsechko, p 29]

[Text] Experimental operation of scraper face conveyers SP-87P-08 with variable design of the drive support is presented. The device of the ratchet mechanism and the advantages are covered. 1 illustration.

UDC 622.822.7:[614.843.2:621.671]

ANALYTICAL CALCULATION OF THE EFFICIENT OPERATION OF A PUMP AND A FIRE-SPRINKLING NETWORK IN A MINE

[Synopsis of article by G. V. Grin' N. S. Khmel' and Yu. V. Gavrish, p 30]

[Text] The formula for determining the diameter of a pipeline with its joint operation with a mine pump in a regime of maximum efficiency is presented. The nomogram for convenient calculation of the diameter is given. 1 table, 1 illustration.

UDC 622.673:678.7:658.58.001.86

REPAIR AND IMPROVEMENT IN DURABILTY OF THE CASING OF AN ABOVE-MINE HEADFRAME WITH POLYMER GLUES

[Synopsis of article by R. A. Veselovskiy, Zh. I. Shanayev and I. G. Manets, p31]

[Text] The technology for repair operations to restore the casing of an above-mine headframe with the use of polymer glues is presented.

UDC 622.271

SELECTING THE OPTIMAL VARIANT FOR THE TECHNOLOGY OF STRIPPING OPERATIONS IN OPEN PITS

[Synopsis of article by V. I. Shestakov, p 32]

[Text] Substantiation is provided for the optimal variant of stripping operations in the open pit "Verbolozovskiy." 2 illustrations.

UDC 622.693.25

RECULTIVATION OF ROCK MINE DUMPS IN THE VOROSHILOVGRAD OBLAST

[Synopsis of article by T. N. Keleberda, V. V. Kul'chikhin and V. I. Makhonchenko, p 33]

[Text] Experimental recultivation of rock mine dumps in the mine administration imeni 19th CPSU Congress is presented. Complexity and specific nature of ecological conditions for each object, the need for an individual approach to solving the question of its phytomelioration are covered. 2 tables.

UDC 622.794.3 (045)

PROCESSING AND USE OF SLUDGE WATERS UNDER HYDRAULIC MINE UNDERGROUND CONDITIONS

[Synopsis of article by I. A. Lozovoy and I. D. Andreyeva, p 34]

[Text] Technological plans are presented for concentrating hydrauli. mixtures and clarifying sludge water in underground conditions of hydraulic mines. 1 illustration.

UDC 622.831.325

EVALUATING THE ECONOMIC EFFICIENCY OF LOCAL MEASURES FOR CONTROLLING MINE IMPACTS

[Synopsis of article by A. A. Filinkov, A. N. Shabarov and A. F. Filimonov, p 35]

[Text] An evaluation is made of the efficiency of local measures for controlling mine impacts in the example of the mine imeni Kalinin from the association Artemugol'. Recommendations are made for the use of hydraulic processing of impact-dangerous bed at mines of the central Donbass region. 1 table, 2 references.

UDC 622.831325.3-19

RELIABILITY OF DEGASIFICATION OF EXTRACTION SECTIONS

[Synopsis of article by O. S. Gershun, V. Sh. Brodskiy, and B. N. Iotenko, pp 36-37]

[Text] Results are presented of studies of malfunctions in the degasification system, laws for distribution of the time of smooth operation of the system of vacuum-pump units, degasification gas pipeline and well; evaluation of the reliability of the degasification system. Suggestions are made for improving the reliability of the system. 1 table, 1 illustration.

UDC 622.411.33

DETERMINATION OF METHANE CONTENT OF COAL BEDS BY CALCULATION

[Synopsis of article by L. A. Sklyarov, R. M. Krivitskaya and T. V. Strukovskaya, pp 37-38]

[Text] The calculation method is used to determine the natural methane content of coal beds and the area of its application. 1 table, 4 references.

UDC 622.831.22

USE OF BED TEMPERATURE TO EVALUATE EXPLOSION DANGER

[Synopsis of article by V. S. Mayevskiy and O. G. Kremenev, pp 38-40]

[Text] An evaluation is made of the change in temperature of the near-face part of the bed depending on the level of its intensity and gas content. Methods are presented for continuous evaluation of the explosion danger of the near-face part of the beds based on measurement of temperature of the surface of a freshly exposed face. 5 tables, 2 illustrations, 1 reference.

UDC 622.413.4:536.2

FORMATION OF TEMPERATURE FIELDS AROUND DEEP MINE SHAFTS

[Synopsis of article by V. A. Kuzin and I. R. Vengerov, p 40]

[Text] A method is presented for determining the width of the cooled zone around ventilated underground structures of different shape. The calculated relationships which do not include the temperature drop and the coefficient of heat exchange are presented. 1 illustration, 3 references.

UDC 622.807.7

USE OF BIOLOGICALLY SOFT SURFACTANTS TO CONTROL DUST

[Synopsis of article by N. G. Tkachenko, V. K. Kolodiychak, A. Ye. Motriy, V. D. Severin, p 41]

[Text] Injection into the bed of biologically soft surfactants, diethanolamides to remove dust is discussed under conditions of the mine administration "Krasnokutskoye" from the association Donbassantratsit. 1 illustration.

UDC 622.33:552.577

LONG-TERM EVALUATION OF ADDITIONAL RESOURCES FOR ENERGY RAW MATERIAL IN THE LVOV-VOLYNSKIY BASIN

[Synopsis of article by V.A Kushniruk, Ye. S. Bartoshinskaya and S. I. Byk, p 42]

[Text] Brief characteristics are presented for additional resources of energy raw material in the Lvov-Volynskiy basin which include thin coal beds, sapropelite coals and carbonaceous rocks.

UDC 553.94:552.578.1 (477.62):622.01

NATURE OF OIL MANIFESTATIONS IN MINES OF THE DONBASS

[Synopsis of article by B. M. Kosenko and A. T. Buleyeva, pp 42-43]

[Text] Data are presented regarding the isolated liquid hydrocarbons at mines of the Donbass. Analytical characteristics are presented fo. the hydrocarbons used as the bases for drawing a conclusion about the nature of oil manifestations in mines.

UDC 622.7-52.662.6

INDICATORS OF THE SIEVE COMPOSITION OF COAL

[Synopsis of article by P. P. Zhukov, pp 43-44]

[Text] The effect of transport operations and time on the sieve composition of coal are covered. Laws governing the distribution of output and ash content of machine classes according to the brands of coals, groups of mines and individual mines are discussed. Recommendations are made for improving the accuracy of evaluating the indicators of the sieve composition. 2 tables, 1 illustration.

9035
CSO: 1822/265

BRIEFS

KORKINO COAL STRIP MINE--Korkino--The plan for rebuilding the country's deepest strip coal mine, the Korkinskiy, of Chelyabinsk Oblast, which Uralgiproshakht [Ural State Institute for Mine Design] developed, has been approved. Coal mining by the open-cut method is now going on at a depth of 420 meters. Under the new design it is planned to deepen it to 570 meters, enabling fuel to be mined until the year 2008. It calls for means for delivering to the bottom of the strip mine the 3,000 people who are engaged in mining, the newest methods for ventilating the horizons and many other things that will ease the miners' work. The country will obtain an additional 40 million tons of coal, which will be much cheaper than coal mined by the underground method. According to the specialists' calculations, savings will be 150 million rubles. [P. Vasil'yev] [Text] [Moscow STROITEL'NAYA GAZETA in Russian 18 Jun 82 p 2] 11409

COKING COAL NEAR ELBA--Khabarovsk--Penetration of the first exploratory hole for coal close to the Elba Railroad Yard, on the Eastern Section of the BAM [Baykal-Amur Mainline], has started, states a TASS correspondent. According to the specialists' opinions, the samples obtained confirm the high calorie content of the solid fuel, from which it will be possible to obtain coke for the metallurgical conversion plant that is under construction at Komsomolsk-na-Amur. "The results of the studies are convincing that truly incalculable wealth is contained here," reported V. Onikhimovskiy, scientific secretary of the Scientific Council on BAM problems of the USSR Academy of Sciences. "The explored reserves alone of the Verkhne-Bureinskiy, Urgal'skiy and Lianskiy Coal Basins are counted in the billions of tons. Iron, manganese and phosphorite ores have been observed alongside the mainline. This year explorers of the earth of the Eastern Section of the BAM plan to turn 13 fields of useful minerals over for development. [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 6 Jul 82 p 2] 11409

KRASNOARMEYSK COAL MINE SUCCESS--Krasnoarmeysk, Donetsk Oblast--Vladimir Ignatyev's brigade from the Krasnolimanskaya Underground Mine of Krasnoarmeysk-ugol' [Krasnoarmeysk Coal Production Association] have won a truly great success. In mastering a longwall that had recently been put into operation and was equipped with the newest longwall-mining machine, the brigade's miners during the last workdays of July sent 4,500 tons of coal to the top. In order to load this mined material into railroad cars, a heavyweight train was required. Since the start of this year, the advanced collective has already sent industry about 490,000 tons of high-quality fuel, 90,000 tons of it above the plan. [N. Lisovenko] [Text] [Moscow IZVESTIYA in Russian 6 Aug 82 p 1] 11409

KARPINSK ABOVE-PLAN COAL--Karpinsk--Twenty fully loaded railroad trainloads of above-plan coal have been sent to customers since the start of the year by Vakhrushevugol' [Vakhrushchev Coal Production Association] mines. Having bettered the schedule by almost a week, they carried out the annual commitments for above-plan recovery of fuel ahead of time. The ash content of the coal is reduced by 0.1 percent below the norm, which is equivalent to the mining of several additional trainloads of fuel. These achievements were dedicated to the 60th anniv sary of the forming of the USSR. Right now the association's workers, in considering new production reserves, have reexamined their commitments and have resolved to mine and dispatch at least 50,000 more additional tons of coal by the end of the year. [A. Mal'tsev] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 7 Jul 82 p 3] 11409

EKIBASTUZ COAL MINING SUCCESS--Ekibastuz--The communist labor brigade supervised by Vitaliy Baryshnikov began industrial operation of a new coal-mining complex at the Bogatyr', the largest strip coal mine in the world. The powerful rotary complex, which has an hourly productivity of 3,000 tons of fuel, was manufactured and sent to the Soviet miners by the Takraf firm of the GDR. Knight of the Order Honorary Emblem Arun Sharipov controls the machine with precision. Since its first days, the brigade has greatly exceeded the unit's design capacity. More than 80,000 tons have now been recorded on the above-plan account. Prior to the end of the five-year plan five more such complexes made in the German Democratic Republic will be put into operation at Ekibastuz strip mines. [M. Steshenko] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 9 Jul 82 p 1] 11409

NERYUNGRI COAL-MINING PROGRESS--Neryungri, Yakutsk ASSR--In honor of the election day for the local soviets, the collective of the loading and transporting administration of Yakutugol' [Yakutsk Coal Production Association] loaded up and dispatched on the Little BAM [Baykal-Amur Mainline] the 5-millionth ton of Neryungri coal since start of the strip mine's operation, a month earlier than called for by the mandatory deadlines. The honorary right to take part in loading and moving the train with South Yakutia's coal was awarded to the winner in the socialist competition, diesel-locomotive driver I. Margolin, and his assistant, I. Tolyak. [L. Rybakovskiy] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 23 Jun 82 p 1] 11409

PERM COAL-MINING SUCCESS--Kizel, Perm Oblast--Miners of Kizelugol' [Kizel Coal Production Association] promised at the start of the year to commemorate the country's anniversary with 55,000 tons of above-plan fuel. They kept their word, on time: the intended goal has been reached. All the collective's underground mines endured the shockwork drive meritoriously. Best among them were the Shirokovskaya, imeni V. I. Lenin, Klyuchevskaya and imeni N. K. Krupskoy mines. [V. Ukolov] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 9 Jul 81 p 1] 11409

SNEZHNOYE COAL MINERS' PROGRESS--Donetsk Oblast--All seven underground mines and mine administrations of the city of Snezhnoye are successfully fulfilling socialist commitments in honor of the 60th anniversary of the forming of the USSR. Collectives of the Underground Mines Snezhnyanskaya, Voskhod and Zarya and the Udarnik Mine Administration made the greatest contributions to the labor achievement. The city's miners have already sent 110,000 tons of above-plan coal to the surface. They plan to mine another 50,000 tons of additional anthracite by the end of the year. [V. Vlasenko] [Text] [Kiev PRAVDA UKRAINY in Russian 17 Jun 82 p 2] 11409

EMBA OIL RECOVERY PROGRESS--Guryev--Embaneft' [Emba Oil Production Association] has recovered about 20,000 tons of crude above the plan. The collective achieved success thanks to the use of advanced recovery technology and the timely introduction into operation of new wells and the good-quality repair of old wells. The collective of Zhaikneft' [Zhaik Oil Production Administration], which has already carried out its annual socialist commitments, is leading in the socialist competition in honor of the 60th anniversary of the forming of the USSR. [B. Glotov] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 29 Jul 82 p 1] 11409

NEW OFFSHORE OIL PLATFORM--The stationary drilling platform, the first support module of which has been erected in the open sea, will enable a speedup of the start of wide industrial operation of the Oilfield 28 Aprelya, which is situated in the Caspian, 100 kilometers southeast of Baku. Early on the morning of 15 June this openwork steel pyramid was loaded on the crane ship "Azerbaydzhan" and started its journey to the field. The next day the crew undertook erection of the support module at its site. Altogether the sailors needed 8 hours to rear the enormous metal structure into the air, lower it through 100 meters of water to the bottom, and fasten it with piles driven into the bottom. Soon after the installation of three more support modules, which are being built by a metal-structure plant, the offshore oilfield workers will place drilling equipment on them and begin the attack on the oilbearing formations. Prior to the end of the year, oilfield workers will start penetrating 12 wells at the Oilfield 28 Aprelya. [AzerINFORM] [Azerbaijan ASSR Information Agency]] [Text] [Baku VYSHKA in Russian 17 Jun 82 p 2] 11409

OIL DISCOVERED IN KARAKUMY--Oil has been found at the Dauletabad site in the Karakumy. A powerful flow of it was obtained from a 3-kilometer well, which is lower than the gas deposit discovered earlier here. And now oil has been discovered, outside the contours of the confirmed gas reserves. "This is a great succes," said chief Turkmen SSR geologist M. K. Mirzakhanov. "The geological explorers did not run into the oil shoestrings of the gas field but into a completely independent storehouse of 'black gold.' During the first 10 hours more than 30 tons of oil were obtained. Now we intend to put down well bores in order to assess the industrial reserves of the black fuel." Oil has been obtained for more than 100 years in the desert regions of western Turkmenistan, outside the borders of the Karakumy. The geologists' prognosis that there is oil also in the republic's east has been confirmed. In the specialists' opinion, a new oil-recovery region will be established here in the future. [TurkmenINFORM [TuSSR Information Agency]] [Text] [Ashkhabad TURKMENSKAYA ISKRA in Russian 14 Jul 82 p 1] 11409

SAKHALIN OFFSHORE PLATFORM--Okha, Sakhalin Oblast--The floating installation Okha-1 has taken up its duties on the Sakhalin shelf. Delivered by high-powered tugboats, it has completed the transfer from winter berthing in the Tatar Strait in the Okhotsk Sea. Severe weather did not stop the offshore explorers of the earth's depths. They have started to drill the first well. [Text] [Moscow IZVESTIYA in Russian 20 Jul 82 p 3] 11409

GAS FOR ESTONIA'S FARMS--Tallinn--The Estonian SSR Council of Ministers Presidium has examined the question of progress in converting to gas in the republic's rural communities. It was noted that this is now going on at an inadequately rapid pace.

Of 27 facilities for agricultural purposes that are supposed to be supplied with natural gas this year, work is proceeding satisfactorily up to now only at 7 of them. The erection of branch gas pipelines to the Syprus, Akh'ya and imeni Khyarma kolkhozes and the Kuuste Sovkhoz still has not been finished. The Ministry of Agriculture is occupied in feeble fashion in converting his facilities to gas, and the only gas construction project for Goskomsel'khoztekhnika [State Agricultural Equipment Committee] turns out not even to have been included in the plan. The Estonian SSR Council of Ministers Presidium required managers of the appropriate ministries and agencies--among whom are the republic's Minister of Agriculture V. Lind, Minister of Fruit and Vegetable Industry Kh. Myannik, chairman of the republic's State Agricultural Equipment Committee A. Nakhkur--to take decisive measures without delay to correct the situation that has been created and to complete in the shortest possible time preparation of the appropriate design papers, to provide rural construction projects with materials and equipment, and to concentrate material resources at the facilities that are due for early startup. Strict monitoring has been established over progress in converting facilities for agricultural purposes to gas, and the responsible officials are being required to report monthly to the Council of Ministers about the work done. The results of socialist competition in various branches of the economy were summed up, the question of training qualified workers for agriculture was examined, and measures for further increasing traffic safety were discussed. The appropriate decrees were adopted. V. Klauson, Chairman of the Estonian SSR Council of Ministers conducted the Presidium's session [G. Gukasov] [Text] [Moscow IZVESTIYA in Russian 30 Jul 82 p 2] 11409

LITHUANIAN OIL REFINERY CONSTRUCTION--Lithuanian SSR--The second phase of the Mazheykyay Oil Refinery, which is to be put into operation next year, is being erected at a rapid pace. Right now the industrial towers are being raised at the construction site, complicated equipment is being assembled, and utility and service lines are being laid. When it reaches design capacity the enterprise's second phase will increase oil-refining capacity 4-fold, and the product mix will be expanded. [Text] [Moscow STROITEL'NAYA GAZETA in Russian 11 Jul 82 p 2] 11409

TYUMEN CLUSTER DRILLING EXPANSION--Tyumen--The progressive drilling method whereby several wells (a whole cluster) penetrate from one site is an ordinary matter for Siberians. More often than not 16 bores originate from one foundation on the ground. Giprotyumenneftegaz [Tyumen State Institute for the Design of Oil and Gas Enterprises] specialists proposed to the production workers an apparently unthinkable variant: 80 wells in one cluster! Yu. Nabatov, chief of the institute's oilfield facilities section and A. Frolov, manager of a group, specified more precisely that such giant clusters (there will be several) had been specially designed primarily for the Sutorminskoye field. This storehouse of oil, which is situated in the north of Tyumen Oblast, has a whole "magazine" of productive horizons. If the field were to be developed by the old method, an enormous number of artificial island foundations would have to be erected. This would be complicated and expensive and would require a lot of time. For the wells are not being drilled to just 1,000 meters....N. Yakupov, chief design engineer, realized that the unusual cluster will require a firm site 700-800 meters long. For indeed, equipment will be delivered and LEP's [electric-power transmission lines] extended not to a multitude of points but to one point and over one road....The oilfield workers, on receiving the papers, at once undertook preparatory operations at the field. And this detail, which is of no little consequence, was also observed: the enormous cluster will enable several penetrators' brigades to work at once at one point. I indicated to

Kh. Stavrianidi, manager of the main administration's drilling section at the Sutorminskoye site, my interest in how things were going. This was his answer: "We have everything ready. We are waiting for the power workers, who are on the point of bringing in the line. And then the drilling tools will go at once into the oil formations." And Giprotyumenneftegaz scientists are thinking already about tomorrow. Cannot such clusters be designed also for the Muravlenkovskoye field? It is farther north, and it is more complicated there: there is permafrost. But if everyone makes provisions for it....Research is being conducted, and the search continues. [Yu. Perepletkin] [Text] [Moscow IZVESTIYA in Russian 23 Jul 82 p 2] 11409

TURKMEN OIL, GAS RECOVERY--From the underground storehouses--More than 10,000 tons of crude and condensate and about 30 million cubic meters of gas above the plan have been recovered since the start of the year from desert fields by Turkmenneft' [TuSSR Oil Production Association] oilfield workers. Valuable raw material was sent to the Krasnovodsk Oil Refinery and to the country's industrial centers. Collectives of the Kumdag, Kamyshldzha and Nebit-Dag imeni 50-letiya SSSR Oil Recovery Administrations are going on ahead. They have carried out their annual commitments for above-plan recovery of raw material. The introduction of progressive methods for operating the fields, which have entered the late stages of development, helped the success of the right-flankers. On the recommendation of TurkmenNIPIneft' [Turkmen State Scientific-Research and Design Institute for the Oil Industry] scientists, water is being injected into the formations in order to squeeze the oil to the surface. Gas is being fed into the wells' annular space, to give it sort of a second wind, helping to lift the crude. [Text] [Moscow PRAVDA in Russian 16 Jul 82 p 1] 11409

CASPIAN OFFSHORE PLATFORM STARTED--Baku--The crew of the crane ship "Azerbaydzhan" required only about 8 hours to install the first support module for the fixed drilling platform. The operation took place 100 kilometers from the shore, in the open sea, at the Oilfield imeni 28 Aprelya. The module was erected by the brigade under Viktor Pinayev and Vagif Yusubov. Now three more support modules are to be installed. The offshore oilfield workers will place drilling equipment on them and they will start the penetration. [D. Melikov] [Text] [Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 30 Jun 82 p 1] 11409

CSO: 1822/255

CONSTRUCTION REPORT GIVEN ON EKIBASTUZ TERRITORIAL PRODUCTION COMPLEX

Moscow PRAVDA in Russian 28, 29 Jul 82

[28 Jul 82 p 2]

[Article by V. Goncharov and Yu. Razgulyayev, special PRAVDA correspondents: "Stages of Ekibastuz"]

> [Text] "In the Pavlodar-Ekibastuz territorial production complex increase the coal extraction, and continue construction of the large GRES's with output of 4 million kW." (From the Basic Directions for Economic and Social Development of the USSR for 1981-1985 and for the Period to 1990).

1. The Power City Grows

It seems that in the vast Kazakhstan steppes, Ekibastuz with its construction sites, black craters of coal pits and new prospekts, straight like a solar ray, are lost. But trains are hurrying here from the East and from the West. The city is nothing like a blizzard waystation. Even now thousands of visible and invisible lines connect it to the entire country, to its today and its tomorrow.

At the first born of power engineering under construction here we saw the motto: "Our Fathers Built Magnitka and Dneproges, and We Are Building the Ekibastuz GRES!" The link between time and generations was revived when we became acquainted with the installer Yuriy Varlamov. His brigade is installing the so-called "tails" of the boilers, the gas-purifiers, electric filters and other equipment. Aces of their work! "We had so many problems with the these 'tails' in the start-up of the first block," they said in the construction headquarters," but now we have no troubles."

To participate in the construction of intensive projects and to work on conscience, to the envy of others has become the family trait of the Varlamovs The father began Magnitka from the first pin, from the stand. He himself built the blast furnaces at Magnitka, the open-hearth furnaces and the coking batteries. Now it is already the third year that the first GRES is being erected in Ekibastuz where every power unit weighs 500 T. His son Sergey is working here. He is also an installer.

There are already many people at the construction site with truly interesting, enviable labor biography. In one of the sections we became acquainted with the young laureate of the State Prize of the Kazakh SSR, deputy of the oblast Soviet of People's Deputies, Vasiliy Sizintsev whose brigade has been given permanent custody of the three challenge Red Banners, including the banner of the Komsomol Central Committee. The collective is famous because in the most difficult conditions it is stably achieving high productivity. This year, when it would seem that all the high-volume, materials-intensive work on the main framework has been completed, the brigade decided to perform work for another million rubles.

The brigades of B. Aralbayev, M. Ksenofontov, K. Beysembekov and T. Mytsak also have enviable work.

"A friendly, stable and highly skilled collective is being created," notes the secretary of the party committee of the trust "Ekibastuzenergostroy" G. Zaychenko. "This is one of the 'secrets' of the constant growth in the rates of construction."

This year at the GRES-1, the fourth power unit has already been put into operation. The power of the station has been brought to 2 million kilowatts. In a word, construction of its first phase has been completed. Before the end of the year, the fifth and sixth power units will be operating. Installation work has been started on the seventh unit. There has not yet been at the construction site those round-the-clock sleepless work marathons when all work is stopped for the start-up of one block. This is understandable, from experience the Ekibastuz rhythm has been adopted. This is very important. It remains at the local stations to install a total of 32 500-ton units with total output of 16 million kilowatts!

The first boiler of the brigade of B. Aralbayev from the trust "Sredazenergomontazh" was installed in a year, and now they are coping with this work in half the time, and with fewer people. The construction line has begun to operate at full power. Not only the heat installers, but almost all the brigades at the special base are enlarging the blocks and using other progressive forms of labor organization.

The introduction of the brigade contract also contributed a lot. In the Ekibastuz administration of the trust "Elektrosredazmontazh," for example, almost all the collectives have been switched to the contract. Although it is most often the fault of the builders that the electricians exceed their time, they have not delayed the start-up of the units even once. The entire shop of installation of electric filters where the brigade of Yu. Varlamov is working has switched to a single contract.

Construction of the first station has not yet been completed, and laying of the second in the GRES cascade has already begun on the shore of the salt lake of Shandaksor.

The city itself is transforming. Since the beginning of construction of the fuel and energy complex, its population has increased 1.5-fold. New multistory buildings have appeared here, prospekts have been laid and a hospital, Palace of Culture of the Power Engineers, modern sports complex and Palace of General Services are under construction.

The rates at Ekibastuz today are gladdening. But for the successful fulfillment of all the tasks set by the party before the creators of the fuel and energy complex, it is necessary to raise them even more. It is impossible to forget that the construction is still behind the initial schedule: the build-up was too long. It also affects the work of the operators. The large industrial enterprises had to stop many times last winter because of the interruptions in the work of the power units here.

"Many of our difficulties," believes the general director of the association "Ekibastuzenergo" A. Mokshin," are explained by the fact that not all the power engineers were ready to operate the complicated equipment. At the panels there are sometimes specialists who practically have no experience of working at these stations. And the builders left a lot undone."

In fact, starting from the first unit where there was R 4.5 million worth of unfulfilled work, a long tail of unfinished work extends behind the builders. This includes the general framework, cafeteria, repair shops, and warehouses. The lack of a true repair base is a special complication in the work of the power engineers. Any breakdown or malfunction becomes a complicated problem, and the repair work often drags on for months. The fault of the builders in the lagging of the rear forces of the station is great of course. The actual labor productivity in many of their subdivisions is below the planned. This means that the necessary volumes of work are done by increased numbers of people. Where are the additional workers taken from? They are taken from "auxiliary facilities."

At the same time, the USSR Ministry of Power and Electrification, paradoxically, allocates capital for planned work in an incomplete volume.

The defectiveness of this financing for the construction of the GRES-2 is especially noticeable. In order to erect the first block in 1984 as planned, it is necessary to fulfill construction-installation work alone for R 200 million. At the same time, last year the Ministry of Power and Electrification allocated a total of R 200,000. The current plan is R 4.6 million.

"We are most of all vexed by the fact that a real threat has developed for disrupting the fixed flow with this labor," says the head of the trust "Ekibastuzenergostroy" E. Filatov.

In fact, next year, they will begin to lay off installers at the GRES-1, and in the first place, from the trust "Sredazenergomontazh," which is now working the most smoothly and stably. What can they be assigned? Won't the brigades for which a work front has not been prepared begin to break down?

This question is now disturbing many people. We recall the conversation in the brigade of B. Beresovskiy from the seventh administration of the trust "Elektrosredazmontazh." The brigade foreman himself, only 30 years old, and just as young installers came to Ekibastuz not for a year and not for 2. They related with pride about the construction site, about their contribution to the development of the country's power engineering. The most important is that they see in front of them their enormous future, for they are faced with building the second and the third, and the fourth giant stations. In the

Kazakhstan steppes it has become possible to create an unusual construction line, not block by block, but station by station. By the way, this method was also one of the important factors which made the Ekibastuz kilowatt inexpensive in capital investments. However, now a quite real threat has developed for an interruption in this line.

PRAVDA has already written about the difficulties that the Ekibastuz workers faced in starting up the first blocks. Then 5,000-6,000 commissioned specialists were working here. Individual blocks were called: "Leningradskiy" and "Uralskiy." In the planning rooms of the construction site headquarters there was no place to sit, and sometimes no place to stand. The managers of the installation trusts and heads of the union headquarters were constant guests here. In the start-up bustle they obviously saw how inefficient at times was the work of the skilled, but newcomer specialist. Often they simply "skim the cream," leaving unsuitable facilities. This reshuffling continues in many administrations even now.

On this background, the work of the heat installers of the Ekibastuz administration from the trust "Sredazenergomontazh" is a special contrast. They were the first to begin to build housing by the economic method and abandoned the newcomer specialists. Today, the administration, occupied in one of the most complicated operations, assembly of the steam boilers, is a step ahead of the other sections in the construction site.

By the way, in its time, the Ministry of Power and Electrification discussed the question of creating in Ekibastuz a large installation trust which would unite all the administrations and would conduct a unified technical policy. But these conversations went no further.

There is still another reason which does not permit complete abandoning of the newcomer installers. This is the shortage of apartments. Ekibastuz is being built quickly. It has overtaken Pavlodar, the oblast center in this respect. But for the rapidly growing energy city, this is clearly not enough. People here are not only involved in stations. The young people are building families and their fate. In the mentioned brigade of V. Sizintsev, there have been 12 weddings in 2 years. And they have not received the same number of apartments. As a whole for the trust, the line for housing has not diminished in several years.

The heads of the trust "Ekibastuzenergostroy" and the Ministry of Power and Electrification consider it a great achievement that the annual production is 50,000 m^2 of housing. But this is less than in 1977. On the whole, there is almost a 50 percent laggingfrom the plan.

"Housing and pulling up the rear forces," says the first secretary of the Ekibastuz party gorkom, V. Temirbayev, "this is what determines the rates of development of the complex today. We are aiming all our efforts at eliminating these disproportions."

In the first place, more principles, persistence in solving large and small problems and intolerance for shortcomings are being displayed here. This year the power engineers have not signed the act for completion of the fourth energy unit for several months, eliminating the incomplete work. Today the

construction of the house building combine for 50,000 m^2 of housing per year, as well as the selection of power engineer cadres has been taken under the constant monitoring of the party gorkom.

Nevertheless, the first station of the Ekibastuz energy cascade is already operating. The four 500-ton units are operating for the five-year plan. The day is not far off when the other four blocks of the GRES-1 will begin to run. Construction of a second station has already begun. The power engineers consequently are now more interested in whether the miners are completely ready to supply them with coal. The next correspondence will discuss the problems of development the coal sector of the Ekibastuz fuel and energy complex.

[29 Jul 82 p 2]

[Article by V. Goncharov and Yu. Razgulyayev, special PRAVDA correspondents: "Stages of Ekibastuz"]

[Text] 2. Coal Stream

We are standing together with the director of the open pit "Bogatyr'" of the production association "Ekibastuzugol'" V. Kalandarishvili at the viewing platform at the very edge of the enormous hand-made dish. A wall of coal whose thickness is difficult to imagine rises far in front like a black bastion. Going into the depths at a slight angle, the fuel bed has an average thickness of about 150 m.

The edge of the quarry has been cut by three multiple-meter benchs, and intensive work is underway on each of them. Powerful rotary excavators in "line formation" are making a round-the-clock attack on the coal bed.

"Do you see that giant unit with the inscription 'NKMZ'?" the director asks. "This is a 5000-ton worker. It can load up to 5000 T of coal in an hour. This is the same amount a good mine produces in a day. But now he is not the record holder. The 1000-ton worker Sergey Zubko has been working the best of all since the beginning of the year. He has unloaded over 4 million tons of fuel in 6 months."

These are the scales, thousands, millions of tons which has become the customary measure of work at "Bogatyr'." This open pit is not at all young, but its fame is spreading around the country. Not only because it is the largest in the world: its rated output is 50 million T of coal per year. It is primarily the people which have brought it fame. Those like Hero of Socialist Labor A. Vitt who started the initiative "Rated Productivity for Each Unit," A. Shishlov and R. Fetser who have achieved record output for the sector many times.

At the same time, the working conditions here are not the easiest. It is enough to say that units of continuous operation have not been used anywhere before Ekibastuz on coal of such hardness as here. But not only the coal is a problem. The rock intercalations whose hardness approaches granite are more dangerous for the teeth of the rotor. The first machines, the veterans relate, shook here as in a fever, and at times simply fell apart.

Many sceptics then left Ekibastuz and others advised returning to the customary cyclic technology. But the specialists of the open pit who were then headed by the current general director of the association "Ekibastuzugol'" Hero of Socialist Labor S. Kurzhey, did not retreat, worked out the technology for drilling and blasting operations to loosen the bed, and provided a number of improvements for the excavators. And the coal flowed.

It should be said that even now when everything would seem to be running smoothly, you cannot call the work at "Bogatyr'" easy. The rhythm here is always of the maximum intensity. Imagine: a railroad car is loaded in only a minute-minute and a half.

"Without precision and interchangeability," S. Zubko says, "we would not get by in our work."

This is precisely how the leading collective works. Here all the miners have two-three related specialties. Where there is no brigade foreman, the senior machine operator, V. Golunov, confidently supervises the crew. Even the assistant machine operators V. Lavrent'yev and V. Gorokhov can independently control the unit.

But the Ekibastuz workers have gone farther. Comprehensive brigades have been operating here successfuly for several years already. They fulfill a complete production cycle, drilling, blasting, extraction and loading. Experience has shown that this method is very effective: each member of the collective, including the blasters and the railroad men, is interested in the final result, a constant growth in extraction. This has helped to overcome many objective difficulties.

Last year both the 5000-ton producers, A. Shishlov and R. Fetser, confidently crossed the 8 million mark. The other brigades are working well too. March of this year has become memorable for all. By the end of winter, a difficult situation with the coal had been created at the country's power plants and the Ekibastuz workers had to help. Then the miners of "Bogatyr'" brought the daily average extraction to 147,000 T which corresponds to an annual productivity of 53 million tons.

Why then in the conversation with the power engineers and the coal miners themselves do you hear more and more concern about the development of the coal sector of the Ekibastuz fuel and energy complex?

"We have many customers. We send the coal even to the European sector of the country," says S. Kurzhey. "At the same time, the power engineers are increasing the rates of work every year. Our builders have adopted a rhythm of work of two blocks a year, each of which, by the way, needs an additional 2 million T of coal. Our growth rate now is much more modest."

In order to keep up with the start-up of the power engineering units, the coal miners of Ekibastuz must bring the extraction to 84 million T by 1985. Is this feasible? The calculations show that it is. All the hope is being placed on the open pit "Vostochnyy" which is under construction. By the end of this five-year plan already it should produce up to 15 million T of

coal, and by the end of the next, double this flow. But all of this is in the future. Now we have seen in the barren steppe an enormous trench and the first kilometers of an approach road. Not one surface facility, general or production has been laid yet. A large part of the equipment, including the conveyers, has not been ordered from the machine builders. In the combine "Ekibastushakhtostroy" they tried to calm us: the plan is constantly being overfulfilled at this facility they say. Work for R 20 million has be . done in 2.5 years. They say the work is advancing. But everything comes out in a comparison. In order to start up only the first phase of the open pit for 7.5 million T of coal, it is necessary to complete work for an additional R 110 million on top of what has been done. We will say outright that it is not easy for the Ekibastuz mine builders to fulfill this volume.

The question of creating a solid construction base for the country's largest coal extracting association was raised long ago. The mine builders essentially do not even help "Bogatyr'" where it is necessary to perform work every year for several million rubles only to maintain the facilities. Because of the weakness of the combine, the plan for opening of housing is interrupted from year to year. This year the 6-months plan has barely been fulfilled by half.

The USSR Ministry of the Coal Industry evidently understands well that the start-up of facilities at "Vostochnyy" is becoming more problematic, and therefore hurried to place an additional burden on "Bogatyr'." It is planned for it to extract 53 million T already this year.

Can this superintensive limit be reached? The specialists say, and the March work results confirm this with figures, that it can. But a lot of work needs to be done for this, and primarily for improvement in the transport plan of the open pit.

"It is a lot easier for us to extract coal today," says V. Kalandarishvili, "than to carry it on the surface."

The empty car or loaded car must pass dozens of switches and stations in the open pit in order to reach the assigned point. The machine operators joke that soon they will be sent to the excavator as on a business trip. Even now a good part of the losses of extraction are due to transport irregularities. Moreover, there is only one outlet trench to the top from the world's largest coal quarry. Any jam momentarily paralyzes the operation of the entire open pit.

The Ekibastuz workers see only one solution: to correct faster the error of the planners and to undo the ever tightening transportation knot. But the discussions in the ministry are different. Instead of the troublesome reconstruction, they decided to simply add another coal field where the fuel can be taken directly from the surface.

It would seem that this is a particular technical question. But it, like a drop of water, reflects the consumer attitude of the sector headquarters to the largest enterprise and the honorable labor collective.

This is a direct paradox. The newspapers, radio and television talk about the labor victories of the Ekibastuz coal miners, their records, and on the whole the association is constantly among the laggers. Without encouragement, without bonuses, the supervisors, engineers and all those remain who made "Bogatyr" the giant. Perhaps the ministry does not know the real situation in Ekibastuz? This is difficult to believe. The heads of the sections and administrations and deputy ministers often come here. But the discussion at these meetings is generally about current affairs, today's plan, tons, and not about the engineering future and strategy. Are these not the reasons for the slow solution to the many urgent problems?

By the way, Ekibastuz has not by-passed the attention of the higher organizations. The commissions with the most diverse authorities come here regularly both to see the coal miners and the power engineers. The manager of the trust "Ekibastuzenergostroy" E. Filatov calculated that in the 5 months of this year they were visited by 27 representative commissions from Moscow and Alma-Ata. There is 1 on the average of every 5 days. And they come for more than a day and each one needs attention. Lots of time is spent on one excursion! And it is also necssary to prepare information.

Why do the representative commissions need this information? The problems of Ekibastuz, as by the way, in many other rapidly developing industrial centers and complexes, need these visits least of all. There should be one approach here: arrive, immediately solve the questions on the spot. By the way, why don't the USSR Ministry of the Coal Industry and Ministry of Power and Electrification conduct their out-of-town meetings of their colleagues here? There is a lot to be discussed at the highest level.

The following fact indicates best of all the "benefit" of some checks. In the association "Ekibastuzenergo" we were shown a fat portfolio with documents confirming the efficiency of moving the builders and operators to the GRES by railroad, today they are transported by buses. It was checked and rechecked that bus transport, especially under winter conditions in Kazakhstan, is expensive and unreliable. Often whole shifts are late to work. At the same time, for GRES-1 alone it costs almost R 4 million annually to transport the workers by bus. However not a single commission could budge the question.

The Ekibastuz fuel and energy complex has entered its second five years. Many shortcomings are undoubtedly associated with the difficulties of establishing it. But despite this, the rates of work are rising here. The power engineers decided to generate over 11 billion kilowatt-hours of electricity by the day of the 60th anniversary of formation of the USSR. The miners of "Bogatyr'" are confidently increasing extraction as well.

In a word, the star of Ekibastuz on the map of intensive construction sites is burning ever brighter. But the contribution of the young city to the country's economy will be even weightier, if all the problems facing them are successfully resolved.

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CSO: 1822/267

FIRST PHASE OF ASTRAKHAN GAS COMPLEX NEAR OPENING

Moscow EKONOMICHESKAYA GAZETA in Russian No 29, Jul 82 p 13

[Article by M. Radchenko, directer of the association "Astrakhan'gazprom": "The Astrakhan Complex Forms"]

[Text] The geological explorers have been engaged for many years in searching for oil and gas in the lower reaches of the Volga. In 1976 the long-awaited event occurred: near Astrakhan, from a depth of 4,000 M, a powerful gas-condensate gusher emerged with a daily output of 600,000 m^3.

The scientists believe that the new field is among the largest in the European sector of the country. It was explored not far from the large industrial cities, quite close to the railroad trunkline and the Volga. Here inexpensive chemical raw material, gas sulfur will be obtained.

In its decisions, the 26th CPSU Congress wrote: "Start formation of an industrial assembly for extraction and processing of gas and condensate, as well as production of sulfur at the base of the Astrakhan gas-condensate field."

Short Schedules

At the end of last year, on an area located 55 kilometers from the oblast center, the first builders arrived. In the AGC (Astrakhan Gas Complex) there will primarily be a field which stipulated preliminary preparation of gas, a plant with the units for refining of gas, condensate and production of sulfur. The main gas pipeline will start from here.

Houses with total area of over a million square meters are being built. Cultural-educational institutions, stores, cafeterias and facilities of general services are being constructed. Of course, it is impossible to imagine a new industrial complex without highways and railroads, power transmission lines, networks of water supply and heat. It is necessary to force erection of enterprises of the production base.

The high rates are dictated by the schedules. They are extremely short. The start-up of the first phase of the complex for extraction and refining of gas is planned for the end of 1984. In 1986, it is planned to bring the output to 6 billion m^3. In this case it is necessary to reach production of 3 billion m^3 of commercial-grade gas, 2 million T of gas sulfur (its consumers will be the industry of mineral fertilizers) and 1.8 million T of stable condensate.

The organizations of dozens of ministries and departments have been involved in the creation of the complex. The greatest volume of work has been given to the USSR Ministry of Industrial Construction, USSR Ministry of Construction of Oil and Gas Industry Enterprises, USSR Ministry of Power and Electrification, and USSR Ministry of Transportation Construction.

According to the adopted variant, all the production facilities of the complex will be located directly at the site, as well as temporary settlements for the builders and installers. As for the production bases of the builders, the Ministry of the Gas Industry (customer), Gossnab and the ministries participating in the creation of the complex, they will be arranged on the outskirts of Astrakhan. Here construction will be underway of well-built quarters where the families of the workers, engineering-technical workers and employees will settle.

A lot remains to be done on the routes of the transport pipelines. It is necessary to develop railroads in this region in order to carry the entire traffic of freight coming to the construction site. In addition, it is planned to build current-operated ferries over the water obstacles, and to build a bridge for heavy freight and a superhighway from the construction site to Astrakhan.

Of the R 700 million allocated for construction of the first phase of the complex, R 500 million will be outlays for the industrial site and its adjoining, and R 200 million have been allocated for construction of facilities in Astrakhan.

The industrial site is now a vast territory which is cut by trenches and foundation pits. The builders are preparing sections for reception of equipment, are extending power transmission lines, erecting settlements of the watch type, cafeterias,stores and a club. Questions are being solved of equipping the settlements and industrial sites with drinking and production water. Systems of sewage and treatment structures are being erected . In short, a landing site is being created for construction of industrial facilities of the complex.

Large construction organizations are being formed, "Astrakhan'promstroy" and "Astrakhan'promgazstroy." They have been entrusted with the general construction work. Installation subdivisions of the specilized ministries are being sent here.

Six thousand workers are now laboring at the construction site. In the near future the number will almost double. The representitive of the general customer is the recently created association "Astrakhan'gazprom."

Not much time remains before the start-up of the first phase of the complex. There are lots of unresolved problems. Material-technical supply of construction is being set up with difficulty. For a number of reasons there has been a delay in the planned documents. Consequently, there has been a delay in designing of order for material resources.

About 60 planning organizations are developing drawings. Many of them as before are indebted to us. This especially concerns the planning institutes of the USSR Ministry of Industrial Construction which are located in Kuybyshev, Odessa and Moscow.

Especial attention should be focused on the questions of selecting the cadres of operators. In the Astrakhan Oblast, a gas industry has not existed until now. There have not been any specialists for extraction and refining of gas. We are inviting them from other regions of the country, primarily from Orenburg where experience of working fields has been accumulated.

However it is not possible to completely supply our industrial complex with cadres from other regions. Up to ten thousand gas laborers will be laboring at the first phase. It is expedient in all relationships to organize their training at the site. It is necessary next year to create a large educational combine in Astrakhan and to reorient one of the professional-technical schools at training of the profession of gas workers.

Now wall panels and other designs are being shipped for housing construction from Kamyshin, Kazan, Syzran and Dagestan. But this is a temporary solution. It does not solve the problem of housing construction. Astrakhan needs a house building combine with output of 140,000 m^3 of housing per year. It is required to rapidly organize the production of concrete, claydite gravel, and reinforced-concrete structures.

The creation of an industrial base has begun, however work is still not going as the situation dictates.

Environmental Purity

Gas in the depths of the Astrakhan field is at a depth of over 4,000 m under a thick layer of clay and salt. The bed pressure reaches 700 atmospheres, and the temperature is on the order of 100°. The composition of the gas is unusual, it has 25% hydrogen sulfide. Extraction of gas requires from drillers and operators high professional skill. Labor intensity of well construction is great.

For stable operation of the first phase of the complex, it is necessary to drill over 20 wells. But we do not yet have enough appropriate technology and special equipment. Therefore drilling is done in an insufficient volume and the Astrakhan drillers need help.

The newly discovered field is located in the preserve corner of our motherland. The general task of the builders and the operators is to guarantee reliable environmental protection, and not to allow any damage to nature during development of the minerals. The scientific research institutes of the USSR Ministry of the Gas Industry, USSR Ministry of Water Management, USSR Ministry of Public Health, and the USSR State Committee for Hydrometeorology and monitoring of the environment are working in this direction. They are developing technological processes which meet the modern requirements of ecology. The enterprises of the complex need to be equipped with modern equipment and

apparatus for purification of harmful emissions into the atmosphere, as well as means of monitoring their quantity and chemical composition. It is extremely desirable to accelerate this work.

Our production association is creating a unified service of environmental protection. It has been called upon to monitor, verify fulfillment by all subdivisions of measures for preventing any negative effect on nature.

The collective of builders should apply the maximum efforts in order to put into operation the first phase of the complex in a short time.

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CSO: 1822/267

WAYS TO IMPROVE EFFICIENCY IN ELECTRICAL ENGINEERING INDUSTRY OUTLINED

Moscow PRAVDA in Russian 18 Aug 82 p 2

[Article by A. Mayorets, minister of electrical engineering industry of the USSR; "Equipment and Economics"]

[Text] In the 11th Five-Year Plan the electrical engineering industry is faced with creating and mastering the output of no less than 6,000 new items. Products with the State Sign of Quality should comprise more than half of the total volume of commercial products. Maximum satisfaction of the needs of the national economy for highly efficient electrical equipment is necessary practically without an increase in the consumption of basic materials and the number of workers. The task is important and complex. How can it be resolved the best?

The Party Central Committee has examined this question and has adopted the decree "Work of the Ministry of Electrical Engineering Industry for Conservation of Material and Labor Resources in Light of the Requirements of the 26th CPSU Congress." Primary attention was focused on the use of intensive methods of management.

Primarily concerned about the development of the fuel and energy complex, the electrical machine builders have started to produce superpowerful turbogenerators, highly reliable units and systems of control which determine the viability of the nuclear power plants. Dozens of institutes and production associations of the sector have created and have started to ship equipment for superhigh voltage transmission lines, 1,150 kilovolts of alternating current. Preparation is underway for the production of equipment for voltage of 1,500 kilovolts of direct current.

The workers of the sector are making a great contribution to the development of the Siberian depths. Starting last year, we have been shipping submersible electric motors of increased power for extraction of oil capable of working at a temperature of bed fluid of +90°. Practically all the oil extracted in West Siberia is pumped on oil pipelines with the help of synchronous electric motors created at the Lysva turbogenerator plant. Dozens of qualified welders have been liberated from working in the difficult natural conditions with the help of the automated complexes of equipment "Duga" and "Styk" for welding pipelines.

The sector is participating in the realization of over 80 comprehensive target programs for the most important trends in scientific and technical progress. Our specialists have started the creation of a new generation of powerful and economical electric locomotives. Jointly with the Ministry of Communications and the Ministry of Heavy Machine Construction, the reliability of the diesel engines has been improved, and with the USSR Ministry of Ferrous Metallurgy, a comprehensive program is being realized for the development of the electric steel smelting industry. It stipulates the broad use of plasma and electron-arc heating to obtain especially high quality steel.

An important prerequisite for intensification is the conservation of material resources. The board of the ministry recently approved the sector comprehensive program for conservation of material resources. Its implementation will help to conserve 390,000 T of rolled products of ferrous metals, tens of thousands of tons of copper, lead and aluminum. In this case the output of products will be increased by no less than 31 percent.

The program orients the designers, technologists and workers on the creation and most rapid development of the resource-conserving equipment. In particular, it is planned to decrease the specific consumption of materials on the average by 10-15 percent. The plans for all the scientific research institutes and design offices include specific assignments for conservation of metals through the introduction of new developments. The fulfillment of these assignments is among the basic estimating indicators for the work of the scientific organizations.

Focusing special attention on the certification of items, we introduced into the charts for the technical level the indicators of material consumption and labor consumption. In those cases where the planned level has not been attained if even for one of the indicators, the product cannot be certified for the highest category of quality. Waste-free and low-waste technologies are being introduced.

An active resource for controlling outlays is the method of functional-cost analysis. The initiator of its introduction was the electrical engineering industry. This analysis became mandatory stage in the conducting of scientific research and experimental design work, the creation and updating of items. Thanks to the extensive use of this method at the enterprises of the sector, it is planned to reduce the net cost of products by more than R 100 million.

A radical condition for intensification of production is conservation of labor resources. Here the decisive link is a high technical level of production which proposes a qualitatively new stage of its technology and organization. Moreover, the level of technology must outdistance the design work in order not to hinder the search of the engineer for the "potentialities of production," but, on the contrary, guarantee the conversion "into metal" of the boldest solutions.

Back in the Tenth Five-Year Plan, certification of the level of technology was started at the enterprises. This indicator became one of the main criteria for determining the quality of the product. When the level of technology was low, the creators of the item could not count on the State Sign of Quality.

Certification helped to reveal many "critical" places where a large number of people were involved in manual labor, and to outline ways to release them.

Conservation of labor is becoming the basic estimating indicator for the activity of the workers of the scientific research institutes and design offices. For example, because of the efforts of the all-union production association "Soyuzelektrotekhnologiya," whose organizations have been entrusted with the creation and introduction at the sector enterprises of [illegible] technological equipment, it is planned to release about 38,000 people by the end of the five-year plan. Thus, the resolution to the problem of conservation of material and labor resources actively involves the collective of many thousand workers of the sector science.

At the same time, it is necessary to admit that the reconstruction is still going with difficulties since it requires not only a change in the psychology of the leaders of the scientific organizations, but also is associated with an acute shortage of technologists of high qualification, designers of special production equipment.

A number of scientific organizations in the sector as an experiment have switched to complete cost accounting. They have been assigned their own circulating resources and are only financed after total completion of the work. This measure made it possible to drastically reduce the "incompleteness" in science, to elevate the interest of the collectives in introducing the results of their developments. In our opinion, the experiment has justified itself, and it should be disseminated to all institutes of the sector.

As for the enterprises which in addition to the active fund-forming indicators (rate of growth in labor productivity, specific weight of product output of the highest category of quality), starting in the beginning of this year, yet another was introduced, the fulfillment of theplan for economic effect obtained as a result of improvement in the technical level of production, organization of labor and control.

The calculated sum of the fund of material incentive is distributed in the following proportions: no less than half goes for stimulation of the labor productivity and conservation of material resources, about 20 percent for incentive for output of products of the highest category of quality and 30 percent for stimulation of growth in the annual economic effect.

If, say, the sector does not fulfill the assignment for the annual economic effect by only 1 percent, this means that the fund for resources of incentive is reduced by an average of R 800,000. By introducing the new indicator into the number of main fund-forming indicators, we count on drastically elevating the interest of the labor collectives in fulfilling the intensive plans and socialist commitments.

The meaning of the adopted measures is that it will correlate more closely the technical re-equipping of the enterprises, accelerated introduction of the new equipment and technology with material interest of the collectives. What is advantageous to the state must mandatorily be advantageous to each enterprise, section and worker!

Under conditions of the rapid updating of equipment and technology, the rise in scales of production, changes in the nature of the worker's labor, and its occupational training, the continuous improvement in the economic mechanism acquires especial importance. Since 1980, the sector has switched to new conditions of planning and economic stimulation and has been operating under conditions of complete cost accounting. Since the beginning of this year, an indicator has been introduced for standard pure product, as well as new wholesale prices.

The experiment whose purpose is to link the rates of rise in production and labor productivity with the level of economic effect from the use of new items of the highestcategory of quality is continuing. It has been extended to the indicator for standard pure product. The standard of wages is set on the basis of the standard pure product. The practice of planning, as we see, is equipped with powerful economic levers. It is now important to reinforce them with specific organizational measures.

The practice of the leading collectives convinces us that the measures developed in the sector yield a good output. The production association "Vatra", for example, is an effective and stable worker. In the last five-year plan because of the rise in labor productivity, the output of products here increased by 40 percent. The enterprise has created strong technological services who were able to equip the shops with special equipment. The collective of the Leningrad association "Elektrosila" decided to obtain the entire increase in the volume of production in the five-year plan without increasing the consumption of rolled metal products. This initiative was widely supported at the sector enterprises. There are many of these examples.

However, time persistently demands a further search for new forms of specific contribution to the solution of key questions of economic construction. The actual technique of planning needs improvement in order to guarantee more complete correlation of the cost and natural indicators. The practice of distributing the funds of economic stimulation must take into account better the contribution of the collectives to the improved efficiency of production and the zealous use of resources.

There are, however, a number of questions whose solution goes beyond the framework of the sector. It is necessary to drastically improve the balance of the plans. The sector is experiencing a shortage of a number of economical modifications of rolled products and electrical engineering steel. Often the shipments of the products of the chemical industry are interrupted, film, varnishes, plastic and paints. All of this inevitably has an effect on the fulfillment of the contract commitments to other sectors.

In our opinion, it is necessary to continue the improvement inthe system of material and technical supply, to exclude the available parallelism, multiple stages in this work. For a greater correlation of the plans for production with the material resources, there should be an acceleration in the implementation of a number of measures stipulated by the decree of the CPSU Central Committee and the USSR Council of Ministers "Improving Planning and Intensifying the Effect of the Economic Mechanism on Improvement in Effectiveness of Production and Quality of Work."

A noticeable place in the products of the sector is occupied by the especially powerful items: hydrogenerators, large electrical machines, electric furnaces. Until recently, the metal and other materials for their fabrication were allocated, strangely enough, from "weighted average standards." The transition to individual calculated standards for these types of items as well would permit a noticeable improvement in the coefficient of use of metal and other expensive materials.

The enlargement of the active associations and the creation of new production and scientific production associations is continuing in the sector. The Ministry of Electrical Engineering Industry jointly with the USSR State Committee for Science and Technology are improving the organizational structures of control of the sector subdivisions. This is necessary because differences still exist in the system of planning and material stimulation of the scientific organizations and enterprises in the framework of the scientific production orgaization. It is clear that this does not foster the interest of the collectives in achieving high final results. The situation of the scientific production association needs pinpointing and supplementing.

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CSO: 1822/267

OPERATION OF ATOMMASH PRESS CONSTRAINED BY INEFFICIENCY

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 5 Aug 82 p 2

[Article by A. Vorob'yev, our special correspondent: "Hero On Paper"]

[Text] This hero is great in articles. And to see it operate is a lovely sight! Now the gates of the heating furnace are opening. From the flaming hell, the sliding fettling removes the white-hot disc of the giant intermediate piece. A pan-card will be made out of it for the bottom of a steam generator. The brigade of blacksmiths works skilfully in special heat-protective robes. Now the disc is on the table of the powerful press, which can push on the metal with a force of 15,000 T. This is a force equal to the pull of five loaded railroad cars!

The operator presses a button. The plunger slowly comes down. The stamping die is enveloped in clouds of smoke. Flame tongues emerge from under the stamp. The thick steel plate adopts the shape of a dish.

"You can only see this at our plant!" the head of the heat press shop Yu. Lekarev says with pride.

Yes, the country has equipped its leader of atomic machine construction with unique equipment. It did not scrimp on the resources. The press is capable of producing 20,000 T of sheet stampings per year.

The installers have worked with great upsurge, and have assembled this child of technical progress 4 months ahead of schedule, in honor of the motto: "We Will Build Ahead Of Schedule, We Will Develop Ahead of Schedule!" The celebration which took place on 14 May 1980 on the day the press was delivered was natural. So were the speeches, the music and the applause.

Now the operators have a different mood. The deputy head of the shop A. Smirnov explains the reason:

"Our distinguished hero is operating one shift per week. It has a solid crew: blacksmiths, machine operators, repair men, heaters, a total of 61 people with the highest qualification. We had to send them to other sections."

What is the matter? Why is the highly productive press idle?

The first reason for the idling of the press is obvious, as they say, to the naked eye. Atommash does not have facilities for casting and rolling. Therefore it has a great dependence on its partners. They have let it down: both the production association "Izhorskiy zavod" and the Kramator plant "Energomashspetsstal'." The latter, for example, last year was supposed to supply 1,200 T of steel casting, but only sent 400 T. It is not fitting for the eminent collective known to the entire country to let down its younger brother!

But another reason lies deeper.

"Internal needs alone are not capable of loading the press completely either now or after output of the plant on full power," relates the head of the plant office of hot stamping V. Rogal'. "It is necessary to form a portfolio of external orders, orders from others. The plans of the ministry and the plant are good, there are bundles of papers, but there areno stamping fittings."

Thus it happened that the calculated (planned) load on the press for 1982 was only 12.3 percent of its power.

Did the Ministry of Power Machine Construction and the leaders of the production association "Atommash" think about this problem? The documents say that they did, and they wanted to forestall it. Back in 1977, the minister V. Krotov approved a comprehensive schedule for technological preparation of production of stamping of housing equipment on the press with force of 15,000 T. It stipulated fabrication of 10 sets of stamping fittings. But all of the schedules were interrupted.

In August 1979, the ministry approved a new schedule for technological preparation of the section for hydraulic sheet-stamping press. Sixty percent of the work for fitting was not done.

In May 1980, an order of the minister No 167 was issued for development of facilities and loading of the sheet-stamping press with force of 15,000 T. A new schedule was added to the order with new periods for fabricating the fittings. But the work once again went smoothly on paper. As of yet five of the most important stamps are missing.

Based on the "high" schedules and orders, schedules and orders for Atommash were also compiled.

The hero was constrained by paper, by irresponsible contractors.

This conclusion is confirmed especially by the fate of stamp No D-473. It was designed for stretching connecting pieces on the shell of the connecting zone of a reactor housing. Now this is done by the forging press of the Izhorskiy plant which is not very adapted for this technological operation. In the near future the press will be redesigned. Atommash may remain without stampings.

Starting in 1977, in all the directive documents fabrication of the necessary stamp was stipulated. The last period was defined by the order of the general director of the association No 373 of 14 April 1982. The contractor was the shop of housing equipment. The period of fulfillment was June 1982.

"Why was the order not fulfilled?" we asked the head of the shop A. Titkin.

"I am fulfilling the plans. This stamp is not in the plans. What does it mean for them to write in the schedules and in the orders. A strict 'junction' of these important documents is required."

And in fact, I did not find No D-473 in either the annual or the semiannual production assignments.

"It disappeared , because," explains the deputy head of the shop for production, "two of the large intermediate products were not received on a cooperative basis, and the plant services did not perform the corresponding preparatory work. It is not enough for us to have one instruction. We need finished technology, a special tool, drawings and castings. We do not even know which of the departments is managing this order."

I would like to ask the leaders of the Ministry of Power Machine Constuction, and the general director of Atommash when this unique press, the pride of the plant will be free of this paper work? And when will specific work follow after words, schedules and orders?

In addition to this correspondence which was published in issue No 32 (188) of the newspaper SOTSIALISTICHESKAYA INDUSTRIYA at Atommash, under the column "Develop New Facilities Faster," material was presented of a surprise inspection of the organization of construction work in the second shift.

Other articles relate the labor accomplishments of the workers of Atommash, and the contribution of the builders and plant workers to the food program of the USSR.

Diverse information is provided by the idea of the cultural life of the workers of Atommash. Kuz'ma Volgodonskiy produces the satire "Focuses Behind The Scene."

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CSO: 1822/267

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Nov 4-1982